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Original Articles

SARCINAE OF THE STOMACH AND THEIR DIAGNOSTIC VALUE

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The occurrence of gastric sarcinae in the contents of certain affections of the stomach was first called attention to by Goodsir in 1842. Since then, Falkenheim, Richter, and many others have contributed to the literature of the subject. Still, there is very little known concerning the cultivation of the micro-organisms; and the diagnostic value of their presence in the gastric contents is to a considerable extent undetermined.

As far as we know gastric sarcinae are peculiar to the stomach. They are formed sometimes in the feces, but never, except when present in the stomach; and it is very probable that the primary growth of the germ never occurs in the intestine. The origin of the growth in the stomach has never been solved. The shape, size, and other characters of gastric sarcinae indicate that they have practically nothing in common with the pigment-forming sarcinae of the air.

Morphologically, there are two forms of sarcina ventriculi, which are, however, probably different stages of development of the same organism. One, sometimes called the large-celled variety, is characterized by the cells exhibiting an arrangement known as the bale shape and staining yellow with Lugol's solution; the other, a small-celled form with cocci in irregular groups and not staining with iodine. Both forms are always found together, although the growth of one may preponderate. The characteristic form of the bale-shaped variety renders it easy of detection.

What is the diagnostic significance of sarcinae in the gastric contents? In general, stagnation of gastric contents tends to pro-

duce growth of germs—the greater the stagnation the more luxuriant the growth. In the case of gastric sarcinae, retention of food is generally necessary for, when these micro-organisms are found in the contents of the stomach, advanced organic obstruction of the outlet of the stomach is almost always present. To find sarcinae without obstruction has never been the experience of the writer. A transient occurrence of the germs has been observed without stenosis of the outlet by some clinicians, but even this has never come under his personal observation.

R. Schmidt states that he found sarcinae ventriculi in a case of cancer of the œsophagus and also in a case of gastric adhesions due to tuberculous peritonitis. These are, however, very exceptional findings. In practice, the presence of sarcinae in the gastric contents should be looked upon as suggesting obstruction of the outlet of the stomach; and the physician should then proceed to make a further examination for the same condition by means of motor meals, radiographic examination, etc.

It should be remembered, however, that although sarcinae ventriculi suggest obstruction of the outlet of the stomach the converse is not true for, in a considerable proportion of cases of pyloric obstruction, sarcinae ventriculi are never present.

The condition of the secretory function is a factor in determining the growth of sarcinae as it is of most other organisms. The sarcinae ventriculi appear to grow best in the presence of a good deal of free hydrochloric acid. This is in marked contrast to the growth of Boas-Oppler bacilli, which is most luxuriant in the absence of free hydrochloric acid. Sarcinae, however, will grow in hyposecretion of gastric juice and even in the absence of free hydrochloric acid, and Boas-Oppler bacilli are not uncommon in the presence of free hydrochloric acid. In the differential diagnosis of benign from malignant obstruction of the outlet these facts must be kept in mind.

In pyloric obstruction due to peptic ulcer common findings are normal or excessive secretion of the gastric juice and sarcinae ventriculi. If in such a case cancer becomes engrafted on the ulcer there is generally, for a time, no marked change in the gastric juice. Frequently, however, after a few weeks, there commences a gradual diminution of gastric secretion. Then, both the Boas-Oppler bacilli and sarcinae are frequently found in the gastric contents. This diminution of secretion may continue until free hydrochloric acid is no longer found, but both micro-organisms may still be present. This renders the differential diagnosis of cancer and peptic ulcer difficult in such cases. The test of Wolfe

or of Solomon may be of aid in clearing up the subject, but in some cases it cannot be done without an exploratory incision.

Again, in some cases of pyloric obstruction due to cancer, sarcinae without the Boas-Oppler bacilli may be present in the gastric contents. Moreover, this may occur in the absence or presence of free hydrochloric acid. It is probable in most of these cases that a simple ulcer existed prior to the cancer. This sequence does not exist in all, for it is not rare to find cases in which the previous history does not even suggest the presence of peptic ulcer.

As stated above, sarcinae in the gastric contents occur only in a high degree of stagnation of food. This fact may aid in the diagnosis of a gastric disease of short duration, because it is to be expected that a rapidly developing pyloric obstruction is more likely to be malignant than benign. This, however, is not always true. At least three cases of pyloric obstruction of a high degree, caused by peptic ulcer, with a history of gastric symptoms of a duration of about three months, have come under personal observation. In all these cases the ulcer was situated in the pylorus, which would explain the rapidity of the development of the obstruction. If a peptic ulcer were situated only adjacent to the pylorus, a high degree of stagnation of food would not likely result in a few months.

Summary.

1. Sarcinae in gastric contents indicate, as a rule, a high degree of stagnation of food in the stomach.

2. The presence of sarcinae in cases characterized by normal or excessive acidity of the gastric juice is, in most cases, due to a benign disease.

3. The presence of sarcinae alone or sarcinae along with Boas-Oppler bacilli, in cases of gastric disease of a few months' duration, is frequently due to a malignant process.

4. The finding of both sarcinae and Boas-Oppler bacilli in the gastric contents, characterized by the absence or presence of free hydrochloric acid, may be either due to cancer or peptic ulcer, but is more likely to be the result of the former than the latter disease.

*THE TREATMENT OF TIC DOULOUREUX

By G. W. Ross, B.A., M.B., Toronto.

The vast majority of patients suffering from this distressing malady can be very quickly and easily relieved by intra-neural injections of alcohol.

The nerve selected for such treatment depends upon the site of origin of the pain and spasm, and commonly this will be within the area whose sensory supply is derived from either the infra-orbital, inferior dental, or supra-orbital branches of the trigeminal nerve. At times all three are involved, seldom primarily, but often secondarily. Occasionally the inception of the pain will be outside the limits of the sensory innervation of these three nerves. Then it may be necessary to inject with alcohol the supra or infra-maxillar branches as they emerge from the base of the skull.

This, however, is seldom necessary, as almost all cases can be relieved by injection of the terminal branches mentioned above - a comparatively simple procedure which any of us might fairly undertake. Not so, however, when the larger branches demand attention. This should be left to some one with special knowledge of the necessary technique. Dr. Primrose has kindly helped me out with such cases.

The substance injected: Alcohol, 85%; novocaine, 1%; meets all requirements.

Amount used: For the supra-orbital and inferior dental branches, 5 c.c. is sufficient.

For the infra-orbital branch 1.00 c.c. should be administered and for the infra and supra-maxillary branches 1.5 c.c.

Where is the injection made? As the case may be: At the mental foramen. At the infra-orbital foramen. At the supra-orbital foramen or notch.

Technique.

Hands, the skin of the patient, and instruments are all carefully sterilized.

The hypodermic syringe is loaded and plunged quickly through the skin to whichever foramen we are attacking. If we

*Read at the Symposium on Headache, at the Section of Medicine, Toronto, Academy of Medicine, November 10, 1914.

are successful in striking the nerve all the manifestations of excruciating pain are evidenced, and then, immediately, the charge of alcohol is driven home.

The immediate results when the nerve has been successfully injected.—As a rule anaesthesia over the area innervated by such nerve.

Note.—This may be delayed for several days even after a successful injection.

Relief of the paroxysmal pain is often instantaneous, but frequently may be postponed for several days. Relief usually is complete for at least six months and often for one to one and a half years. The average is about ten months when re-injection is necessary.

How does the alcohol act? The intra-neural injection of alcohol induces a chemical resection of the nerve with peripheral degeneration beyond the point of injection. When regeneration of the nerve occurs, then the pain of the tic returns and another injection is necessary. I have already injected several of my patients three or four times.

In very severe cases, only removal of the gas-serian ganglion will be effectual.

Hemicrania.—This disorder is often called migraine, but since the term migraine is loosely applied to any sick headache the term hemicrania is advisable.

This headache so-called should probably be considered a clinical entity akin to epilepsy. There is the hereditary tendency, the aura and the seizure. The aura is commonly ocular —flashes, or zig-zag splashes of light, etc. Shortly after there follows pain, usually very localized in one or other temporal region (seldom in both). From this confined area, the pain radiates over the whole of one side of the head, occasionally in severe attacks reaching the neck. There is no tenderness. The angular and perhaps the auriculo-temporal arteries seem distended and visibly pulsate while the sufferer is obviously agonized with pain. Nausea soon supervenes, and is often followed by vomiting and prostration, which lasts from some hours to a day or two. Suddenly relief comes, and the next attack in a week or a month or two is awaited.

The underlying causes of this distressing malady are unknown, and so we are helpless to prevent attacks. I recall one case where calcium therapy seemed to have helped and another where appendicectomy marked complete freedom from attacks. It seems to me possible that a chronic focus of infection some-

where within the body may ultimately be proved to play a part in the causation of hemicrania.

Treatment.

Immediately upon the advent of the aura administer a saline purgative, and fifteen or twenty minutes later one should use one of the coal-tar products.

The following is a useful prescription:

℞

Phenacetine ..... grs. 2½
Ammonol ..... grs. 1½
Caffeine ..... grs. 1
Fiat Cap. No. 1.
Mitte, 12.
Sig.—Three at once and repeat in half an hour and again in four hours if necessary.

Another useful combination is:

℞

Antipyrine ..... grs. 8
Caffeinae Citratis ..... grs. 5
Misce.
Fiat pulv. No. 1.
Sig.—One and repeat in two hours if necessary.

I usually advise a very hot hip-bath for a period of fifteen minutes, and one half-hour after the aura a large simple enema.

From the very first of the attack the patient should lie down, if possible, in a quiet, half-darkened room, alone. No food should be taken, and only sips of ice-water to quench the thirst.

A menthol pencil rubbed on the skin in the temporal region is comforting.

Upon two occasions an attack has been almost immediately controlled by injecting into the focus of the pain about 1.5 c.c. of novocaine. This simple procedure seems worthy of further trial.

Once the cephalalgia and gastric symptoms have been established the treatment is purely symptomatic.

Maintenance of the general health of the subject of hemicrania seems to avail little or nothing in preventing recurrence of attacks once the tendency has been established, but errors of

refraction should be carefully sought for and corrected and insomnia controlled. We should also take those measures which increase the calcium content of the blood. These will be discussed later in connection with the next class of headache, namely, that associated with so-called lymphorrhagia. This term has been applied to that blood state where the lymph escapes too readily into surrounding tissues, thus flooding the lymph channels with fluid. Water-logging of the tissues ensues and with this a number of symptoms and signs.

Briefly these are:

1st. The appearance of anæmia without anæmia in any sense.
2nd. Shortness of breath.
3rd. Discomfort immediately after food.
4th. Constipation.
5th. Hæmatogenous albuminuria at times.
6th. Dysmenorrhœa at times.
7th. Oedema, chilblains, pruritus and urticaria.
8th. Headaches of a definite type.
9th. A lowered coagulability of the blood with a deficiency of the salts of lime.

The headache is peculiar in its symptomatology as follows:

1. It is always worse in the morning, tending to lessen in intensity as the day wears on until by the evening it has quite disappeared. Then the patient feels exceedingly well and the mental processes are active. A heavy sleep follows, succeeded by lethargy, physical and mental; headache and anorexia on waking. Such a patient always finds it difficult to get the machine going for his day's work.

2. A peculiar perversion of appetite is characterized, namely: An abnormal desire, commonly gratified, for very acid things—such as grape-fruit, oranges, vinegar, table salt, etc.

Sweets are distasteful.

Treatment.

Dietetic.—Forbid all substances which lower the coagulability of the blood, such as:

Fruits (cooked or raw).
Tomatoes.
Rhubarb.

Vinegar, etc., should not be taken.

And shell-fish.

Ordinary table salt should be used only in small quantities.

Cow's milk is beneficial on account of the lime contained in it.

Specific.

The administration of a soluble and absorbable salt of calcium the following is a useful prescription:

℞

Calcii lactatis ..... 2 drachms
Elixir saccharini ..... M. 40
Essence zingiberis ..... 1 ounce
Aquae ad ..... ozs. 8
Sig.—4 drachms ex aquam.
T.I.D. A.C.

This should be taken for several weeks, and then omitted until there is a return of symptoms.

Symptomatic.—Control of constipation is important.

An effectual headache powder is justified for immediate control of the cephalalgia.

*A CLINICAL LECTURE ON FURUNCLES AND FURUNCULOSIS

By Sigmund Pollitzer, M.D.,

Professor of Diseases of the Skin in the New York Post-Graduate Medical School and Hospital.

Gentlemen:

Everyone knows how to treat boils. In fact I think I may say that everyone knows how to treat boils better than everyone else! If, in the face of this prevailing opinion, I venture to describe my method of treating boils and to insist that it is a good method well worthy of a trial, it is because I have tried many methods of treatment, and have, therefore, a basis for comparison, and because I have had perhaps a larger experience in this field than most of you. Let us, first, be clear as to what a boil is. It cannot be necessary for us to dwell on the absurd popular view that a boil is due to some impurity in the blood which is making its way out of the system by way of the skin. A boil is produced in one way and in one way only. It is the result of an infection of the skin with the staphylococcus aureus by way of a hair follicle. The disease can be produced at will on the skin by the simple process of rubbing some of the germ-laden pus from a boil with gentle friction into the unbroken skin. I say gentle friction because if the epidermis is injured by the friction the infection takes place directly into the cutis and travelling down to the loose cellular tissue of the subcutis may give us a diffuse phlegmon (or cellulitis, to use a bad term) instead of the circumscribed phlegmon that results from the infection by way of the hair follicle.

The first effect of the beginning activity of the infecting organisms is manifested clinically as a minute red papule, which itches and smarts a little. The centre of the little papule is pierced by a lanugo hair, showing that the process is localized in a hair follicle. The next day the papule is considerably larger and at its apex a minute vesicle may be seen filled with purulent serum. This vesicle is soon ruptured by contact with the clothing or the finger nails, and its place is taken by a small crust or scab. The little papule meanwhile increases in size, the area of redness extends, the infiltration becomes more marked, there is a prominent, painful, throbbing tumor, the pain is severe enough to interfere with the patient's

* Selected from The Post-Graduate.

rest, and there is perhaps a slight rise of temperature at night. Four or five days after the beginning of the process a drop of creamy pus makes its appearance at the side of the little crust that caps the tumor, and the crust may be lifted off, only to reform during the next day, but within 24 to 48 hours after the first appearance of the drop of pus there is often quite suddenly—after some muscular strain, such as coughing, sneezing, etc.—a considerable discharge of pus, together with some necrotic shreds, one of which is usually of considerable size and is known as the "core" of the boil. The virulent organisms that have produced the circumscribed inflammation of the pilo-sebaceous follicle and the surrounding tissue had killed the central portion of the affected area *en masse*, and it is this central necrotic mass that constitutes the "core" of the boil. The core itself is loosened at its peripheral surfaces by autolytic processes and it is the fluid that results from this autolytic liquefaction at the sides of the central mass that first makes its appearance as the drop of pus that exudes from under the little crust. With the discharge of the core the painful symptoms subside at once: the swelling decreases, the vivid redness grows paler and the infiltration palpably less. Pale granulations soon fill up the gap left by the loss of tissue, the epidermis pushes forward over the opening at the surface, and in 10 days from the beginning of the process as a minute red papule, the boil is gone, leaving only a small area that remains reddened for a few weeks and a scar that will persist through life.

Boils differ in size from a moderate papule to a large tumor with an infiltration a couple of inches in diameter, but even the largest furuncle is not a carbuncle in which the inflammatory suppurative process extending down to the subcutis spreads laterally through the areolar tissue there, constituting a deep cellulitis with ascending channels of suppuration that reach the surface in a series of furuncular points surrounding the primary site of the infection. A carbuncle is always a grave infection and requires prompt surgical treatment, while boils are always the effect of a direct local infection with the staphylococcus aureus. It must be remembered that all individuals are not equally susceptible to this infection. Some people enjoy a high degree of natural immunity while the tissues of others offer a peculiarly favorable soil for the germs. Systemic conditions favoring the development of boils are the state of physical depression following any acute illness, gout, nephritis and especially glycosuria. In these systemic disturbances a furuncle should always be regarded as a possible serious affection, and the first to make its appearance must

not be neglected, lest on the favorable soil a crop or succession of boils follow the first and constitute a serious complication in the weakened patient which may even lead to death.

It must be borne in mind that a single furuncle is not only the effect of the invading germs, but is also a factory for the production of germs, and the pus exuding from it loaded with virulent cocci spread upon the skin by the clothing, the dressings and the fingers of the patient or his attendant readily leads to a multiplicity of furuncles, constituting the state of furunculosis.

As to the location of boils, while a single boil may make its appearance anywhere on the skin, it is a fact that in males fully ninety per cent. of solitary boils are located on the back of the neck, and in women, who are far less prone to furuncles than men, boils are rarely found in this location, being more common on the trunk, especially about the axilla and near the breasts. In general there is much significance in the popular saying that boils come where they are most in the way; that is, they are located where the integument comes most frequently in contact with hard, external objects—the starched collar in men, the corset in women. Other favorite sites for boils are the wrists (stiff cuffs) and the buttocks and back of the thighs (hard chairs). The rôle of these external objects in producing boils is obvious; the infecting organisms reposing harmlessly at the orifice of an intact hair-follicle are forced into the follicle and the walls of the latter, damaged by contact with and pressure from the firm external object, and once within the follicular wall the furuncle is started.

I have dwelt on these general considerations of etiology and pathology because they are important for the proper understanding of the treatment. We can do little to prevent the occurrence of a boil. Cleanliness is, of course, an important factor, and indicates the regular prophylactic employment of some mildly antiseptic soap, such as synol soap or ichthyol soap in those in whom we have reason to fear the occurrence of furunculosis, such as the diabetic. But on the other hand the most cleanly people are often the victims of furunculosis, and indeed too much bathing may directly increase the probability of infection through the irritating, drying effect of soap and water on the skin. But after a boil has once begun we can generally abort it, cut short its career, by prompt measures. The little papule should be painted at once with tincture of iodine, and this application repeated twice more in 24 hours. Further applications are useless; if the boil does not manifestly subside after three applications of iodine, a further application only complicates the condition by rendering the epidermis

tough and resistant. If the applications of the iodine are made in the earliest stage of the process you may count on aborting the boil; and in those subject to furunculosis every little inflammatory follicular papule should be regarded as a possible boil and treated accordingly. When the patient comes to us with a furuncle beyond its early stage, abortive treatment is useless, and we must direct our efforts toward relieving pain, shortening the normal duration of the boil and preventing further infection through the careless spread of infection matter over the surface by means of the fingers, the clothing, etc. I could fill the hour with a recital of the various methods of treatment that have been recommended for the accomplishment of these indications, but I propose to limit myself to an account of the method which I have found most efficient and most agreeable to the patient. Let me say at once that I do not incise a boil. A good incision, it is true, by relieving the tension of the epidermis, relieves the pain. But it accomplishes this at the expense of a great deal of pain to the patient, and beyond this it accomplishes nothing. The same end can be obtained by more agreeable methods. In the first place, the patient should receive at once a hypodermatic injection of about 400 million dead staphylococci, that is, the so-called vaccine of furunculosis than which theoretically the autogenous vaccines would be more efficient. We cannot wait for the bacteriologist to prepare a vaccine for each case, and as a matter of fact I have found the stock furunculosis vaccines to be obtained at every druggist's to be sufficiently effective. You know from our previous talks that I personally am not very much impressed with the value of the vaccine treatment of diseases in general. For most infectious diseases I think vaccines quite useless. But of their effect in furunculosis, one who is familiar with the normal course of a boil cannot fail to be convinced. A large, hard, painful, throbbing boil, say on its third or fourth day, will within twenty-four hours of the vaccine injection be softened down, the infiltration manifestly subsided, the pain greatly diminished or gone, and the discharge of a thin pus indicates the stimulation of the autolytic process which goes on till the central necrotic mass itself is liquefied and the boil heals without the discharge of a core. This, gentlemen, is the rule with well-advanced boils. Sometimes even in this stage the boil is aborted by an injection, the pain and inflammation subside, the infiltration slowly is absorbed and the boil disappears without breaking down and discharge. In the earlier stage of the infection the vaccine injection aids obviously in aborting the boil. In any event the vaccine treatment is indicated as a means

of increasing the resistance of the patient and reducing the liability to further infection. For this purpose a series of injections should be given at intervals of four or five days, four or five injections are usually sufficient. Sometimes—for unknown reasons—the vaccine treatments fail to give the expected result, and it is useless, perhaps harmful, to continue with them. I have recently seen a case of furunculosis in which the medical attendant gave no less than twenty-four injections of an autogenous vaccine and fresh boils continued to appear. I cured this patient promptly by purely external applications.

The external treatment which I employ consists in the application of a plastic, first recommended by Dr. H. G. Klotz, of this city, made according to the following formula:

Emplastic diachyli	60
Emplastic Saponis	25
Cerae Japonicae	2
Petrolati	8
Acidi salicylici	5

M. ft. emplastrum lege artis.

It is useless to hand this prescription to your patient and tell him to apply the stuff. It will take the druggist a day to make it, and at his first attempt he will probably make it badly. I advise you to give the formula to a druggist in your neighborhood and direct him to put up a quantity of the plastic and keep it in stock, rolled in sticks of about a half ounce each, wrapped in paraffined paper, in which it will keep indefinitely. The patient is instructed to spread the plastic by means of a stiff knife on a sheet of common muslin (sheeting), "like butter on bread," and apply a sufficiently large piece of the spread plaster, say one to two inches square, centrally over the boil. The effect of this plaster is almost immediate. The plaster acts as a cutaneous splint to protect the tender area, it softens the epidermis and thereby relieves tension quite as effectively as an incision; it softens and removes the little crust at the summit of the boil and thereby facilitates the discharge of the pus, and finally it serves as an occlusion dressing and by preventing the accidental spread of infectious matter over the skin reduces the probability of fresh infections.

The plastic should be changed—applied fresh—at first once a day, later when the boil is discharging freely twice a day, and perhaps three times on the day of the discharge of the core. To

cleanse the skin from the adhering traces of the plaster, to remove it from the fingers and the knife and scissors used, a pledget of cotton wet with benzine should be used. At each change of dressing the boil should be gently squeezed—with emphasis on the "gently"—to remove the droplet of pus that is ready to come out, and the pus itself wiped up—not smeared about—with a bit of cotton moistened with a bichlorid solution and squeezed dry. It may be well, too, at each change of dressing to soak a considerable area of the skin around the boil for five minutes with a layer of cotton thoroughly wet with a bichlorid solution to kill any superficially located germs.

Gentlemen, I beg you to believe that by the methods which have been outlined you will come nearer than by any other method I know to attaining the therapeutic ideal and cure your cases of furunculosis *tuti cito et jocunde*.

LIMITATIONS OF BRONCHOSCOPY

Chevalier Jackson (American Laryngological Association).
(Pittsburg.)

After a long series of successful bronchoscopic foreign body removals one is apt to think that there are no limitations to bronchoscopy. The author had had five failures, one of which he excluded because he alone had bronchoscoped the case and permission for a second bronchoscopy had been refused. The other four cases had been attempted by two or more other bronchoscopists, and therefore might be said to define the limits of bronchoscopy. The limitations of bronchoscopy were reached in the inability to find a small foreign body far down and far out at the periphery of the lung, rather than in a failure to remove when found. The limitations in a particular case could not be said to have been reached until bronchoscopy had failed at the hands of at least two bronchoscopists of experience. Then thoracotomy should be done immediately, without waiting for pus formation. In his own cases the author would not feel justified in advising thoracotomy until another bronchoscopist besides himself had failed. Waiting for a foreign body to be coughed

up was inadvisable, because, as shown by Delavan, even after expulsion, death had followed from disease meanwhile set up.

Dr. Cornelius G. Coakley, New York City: With regard to the case of 1908, referred to, this woman had held a pin in her mouth; it was one with a white bead head and was about an inch long. She also had a very large goitre which had compressed and dislocated the trachea so that it was practically impossible to pass a bronchoscope down to the trachea. We could not use force enough to pass it below the compressed area of the trachea as far down as the bifurcation. A tracheotomy was done and then a subsequent attempt was made to get the pin; the patient coughed and I lost the pin, which went down further with the point up, and although I was able to see it, I was later unable to get it. Dr. Jackson did not even see the pin. I think there is no question that had the modern methods of lung surgery with the intratracheal anesthesia been then developed, it would have been a perfectly safe and probably successful procedure in removing the pin. This attempt took place in about the first three weeks of the involvement. Dr. Jackson, in his modesty, did not tell you of another case. Dr. Jackson very kindly came to Rochester about two years ago to see my sister-in-law, who had inhaled a piece of orange peel through the larynx into the trachea, and developed soon after a very severe irritating cough and bronchitis, forgetting all about the original cause until about two weeks after the accident, when the physician discovered this localized bronchitis and could not understand why it was localized until he got this history. Moreover, the fact that on two or three previous occasions some similar foreign body had been taken in during the process of mastication, coughing and inhaling, and each foreign body had been expulsed within a few hours or two or three days after the accident. A radiograph showed considerable involvement of that side of the lung, but air could get in. After a physical examination Dr. Jackson decided, although there was nothing showing in the radiograph, not to do a bronchoscopy. The patient developed an abscess there and a bronchiectatic abscess or abscess of the lung, and discharged pus in great quantities and lost fifty or more pounds in weight during the next six months. The sputum showed no evidence of tuberculosis. She made a good recovery after a year of suppurating process in the bronchus or lung about this bit of white skin from inside the peel of the orange. If Dr. Jackson had gone down and done a bronchoscopy, in all probability with his skill he would have found that piece of skin and removed

it and saved the patient the following dangerous, but fortunately not fatal, condition.

Dr. Thomas Hubbard, Toledo: With regard to the limitation of bronchoscopy, this may often be established by the patient. Nothing is so exasperating as not to have your patient's support and that of his physician. Dr. Jackson will corroborate me in saying that secondary operations are very difficult ones without the full support of the patient and attending physician. On the other hand, occasionally the support of the patient is a factor in success. I recall a case of a woman who had a fragment of dental cement in the lower right bronchus, and one of these radiograms reminds me of it; it was located about the ninth rib posteriorly, with some months of ulceration, abscess formation, and all symptoms of tuberculosis. This woman's intuitive conviction that she had a foreign body there saved her life. Although two or three radiographs showed nothing, she insisted there was something there, and finally a competent roentgenologist located it. The first attempt at removal was a failure; the abscess cavity was full of pus and debris, and I could not locate the foreign body; the second attempt was made with a stereoscopic picture to guide us, and we successfully removed the foreign body and the patient recovered. Following the first operation I told her we had failed, but she said, "Never mind, you will get it the next time." That courage inspired us to do our best, and we were successful.

I recently had another patient with an upholsterer's tack in the right lung, who had been worked upon four hours consecutively by a bronchoscopist under local anesthesia. He had literally soaked the patient with cocaine and his courage never faltered. After four hours' trial he consented to another type of operation. This I deemed impracticable by the upper method, fearing laryngeal edema after such a prolonged use of the tube. So a low bronchoscopy was done and the foreign body was found. The previous efforts had turned it sideways and made it very difficult to extract. I must say that I doubt if the upper method could have reached the point of that nail, because it was so far to the right, and it was necessary in the introduction of the tube through the lower wound to carry it off at an extreme angle to bring the tack into the tube.

Dr. Emil Mayer, New York City: I recall being asked to see a boy who had a tack in his right bronchus, which had been there for more than a year, in the Presbyterian Hospital in New York. It was quite easy to do the bronchoscopy, but I simply could not see any sign of this tack. The bleeding was profuse and put me in such

position that I could not see any evidence of the foreign body, and I felt that here was one of the important rules to live by—"be sure you are right, then go ahead." It is possible if then I had known as much about using the powerful magnet as Dr. Iglauer has recently recorded, I might have been more successful.

In another instance, showing the difficulties of bronchoscopy, I was called recently to see a young infant of about thirteen months, who had inhaled an open safety pin. A picture showed the pin in the upper portion of the larynx, and the local physician thought he could get it out by doing a tracheotomy. He failed A second picture showed the pin had slipped down into the bronchus. It was not a difficult thing to introduce the bronchoscopic tube through the opening the physician had made, but the baby's condition was poor, and I could not find the pin; the child's condition becoming worse, I desisted, and a few hours later the child died.

Dr. D. Bryson Delavan, New York City: It is interesting to understand the limitations of bronchoscopy, but also to thoroughly realize what it has done for humanity, and we all recognize that it is purely an American invention. Dr. Horace Green was the first to promulgate this method of treatment. Before the days of bronchoscopy the inhalation of foreign bodies was necessarily fatal. I remember a case in the '80's at the New York Hospital, where a young trained nurse with pleurisy was placed in my hands, and we aspirated the chest. When introducing the cannula, and just as we had it well in position and were about to withdraw the blade, the girl made a wild movement of the arm, drawing it sharply back so as to break the needle close to the body, and by the time we raised her arm the needle had disappeared. We said nothing about it: there was a rise of temperature, but the patient got well. I followed her about twenty years, during which time she carried on her function as a nurse in excellent health.

Another case was a young farmer, who inhaled a full head of barley. The accident was followed by violent pneumonia and that by abscess of the lung, which broke through the outer wall of the chest, and in coming away the head of barley was found intact. He survived all of this. Such results are extremely rare.

Dr. E. Fletcher Ingals, Chicago: I am very glad that Dr. Jackson has brought up this subject, and I hope he will in closing say something about the limitations as to time. Dr. Hubbard spoke of some one working for four hours, and this impresses upon me the necessity of having a final word on the time one may work on such a case. For my own part, I have felt that we ought not to

work more than half an hour. When one feels the next second will be successful, he hates to quit; also when there is a good deal of secretion, you dislike to stop before you try once more. In some of these long drawn out operations, about nine-tenths of the time is occupied in swabbing and one-tenth in looking for the foreign body. If we say no case should be operated on for longer than one hour, we would not be far wrong; while half an hour is the limit in the majority of cases.

I have had my failures in getting out foreign bodies, and I have sweat blood over them. I have recently, as you know, written a short article on fluoroscopic bronchoscopy, which I think is going to be a great aid in certain cases. With foreign bodies which do not throw a shadow, we must still rely on ordinary bronchoscopy. When there is an abscess formation with much pus, it is often impossible to find the foreign body. When there is a stricture it is liable to be impassable. Fortunately, some of these organic substances will be coughed out, but I think that 90 to 95 per cent. of people will die from foreign bodies in three or four years from various abscesses, usually multiple, unless the foreign body is removed.

Dr. William E. Casselberry, Chicago: These bodies do not always stay put in the lungs; they are movable, some of them, and it may explain why some of them, such as collar buttons, etc., have not been found on bronchoscopic examination. This was illustrated in my practice by a large grain of raw corn, first in the bronchus of a very small child; the child was small, and I should perhaps have made a lower bronchoscopy, but I made an upper bronchoscopy, and although there was considerable difficulty in getting this tube through and in getting vision, it did go to where the skiagraph showed a spot which seemed to be the grain of corn, and this showed in four skiagraphs. It corresponded to a place where there was obstruction and density of air. I aimed for that spot with my very small bronchoscopic tube, and searched diligently, but found no grain of corn. Things were beginning to look very uncertain, when, on withdrawal of the tube, gradually and cautiously, just as my tube slipped out of the top of the larynx, the grain of corn popped into view beneath one vocal cord. In that position of the patient, with the head down, it had left its position in the bronchus, and slipped up.

Dr. Harris P. Mosher, Boston: I have put the limitations upon myself rather than upon the subject. Certainly, in the case where I hunted two hours the other day to find a foreign body, I felt the limitations were mine.

In one case, after the patient came out of ether, there was a right hemiplegia, but that was the first time it had ever occurred in any case I have had to do with. The question came up as to what was the cause, whether it was the heart condition, the strain of the cyanosis in a thick-necked individual, or an embolus.

There is another thing in connection with bronchoscopy. I have not seen it mentioned in the books, but it has occurred to me three times successively. This is a procedure that I do not feel like bringing before you, as it seems like going back to working in the dark. That is the old procedure of fishing. As you know, in many cases when you get the open speculum in, which was used before Dr. Jackson's speculum was devised, the cords stand very clearly apart and you look well down into the trachea. The trachea, however, is not likely to open. It occurred to me in such cases you might use the trachea for the tube in place of the bronchoscopic tube, in other words, having the cords well open, you could go down with your forceps and take a blind shot in the dark, knowing it was a blind shot. The first case of mine was in a two-year-old girl, who had a two-inch pin lying head up and across. In that case a blind shot, boxing the compass with my forceps, was successful. The second case was a fifteen-months'-old baby, who had a nail in the lower bronchus, head up, and in that case I decided to try a shot before putting the case under ether. I caught the head of the nail and brought it out. I just have had a third case in connection with Dr. Clark, in which a fifteen-months'-old baby had a peanut in the bronchus for three or four days; the trial of a luck shot here did not reveal anything. A luck shot in the right bronchus produced nothing, but in the left bronchus it brought out the peanut. If you will gauge the limitations and put a limit on yourself, it is worth while to try this shot in the dark, because it will sometimes work.

Dr. Chevalier Jackson, Pittsburg (in closing): In regard to Dr. Mosher's statement as to the limits, the point I want to make is that the difference between personal limitations and the limitations of the method are shown when two men have tried and failed, for then I think we can call that failure due to the limitations of the method rather than to personal limitations.

In regard to the case of embolus that occurred after a foreign body which was quite easily removed four weeks previously with no special difficulty. Either from a septic endocarditis or from the lung itself an embolus had gotten into the cerebral circulation. His physician reported the boy improved for almost a month and

gaining rapidly, when suddenly he had a convulsion with paralytic symptoms.

Dr. Swain raises a number of interesting questions in regard to anesthesia, but I have seen no reason to change my attitude in this regard from that of two years ago, especially in children under six years of age.

In regard to suspension laryngoscopy for foreign bodies, I have not tried it, and therefore am not qualified to speak; I have no doubt it has a large field of usefulness.

The limitations in regard to time were asked for by Dr. Ingals. Each must decide for himself. The limitations stated by Dr. Ingals are about right. If every man would publish the time used on every case it would be well. Half an hour for a child and an hour for an adult might be taken for a standard, to be modified in the particular case. My own personal limits have been in adults three and a half hours, but this patient had no anesthetic, he was a Marathon racer, an athlete used to enduring physical stress, and he insisted on my going ahead.

Dr. Ingals brought up the limitations in upper lobe bronchoscopy, which I am glad he called attention to. The limitations I spoke of were far out in the periphery in the posterior branch, too small for bronchoscopy. All were failures to find, not to remove foreign bodies after finding them.

Dr. Delavan referred to Horace Green's work; this is entirely new to me.

Dr. Mayer's and Dr. Hubbard's points bring up too much for this discussion. In regard to Dr. Coakley's case, where we decided not to do the bronchoscopy, that was an error of judgment on my part, and is not to be taken into consideration in this discussion, because if we include the errors of judgment, there is no limitation to what bronchoscopists may do.

THERAPEUTIC NOTES

The Uses of Petroleum in the Treatment of Constipation and Other Diseases in Infants.—The *Clinical Journal* of July 15, 1914, contains an article by Pritchard in which he admits that the general claims of paraffin as an intestinal lubricant require no corroboration on the writer's part, but in its special application in the treatment of those heterogeneous disorders of infancy which are often classified as indigestion its great value it not yet fully appreciated by the medical profession. As the writer has elsewhere pointed out, most of the so-called troubles of indigestion in infancy are associated with disturbances of the motor functions, such as spasms of sphincters, entero-spasms, or dysperistalses of one kind or another. In these conditions it is extremely useful to have at command an efficient lubricant, such as petroleum, which can penetrate to the lower reaches of the bowels without absorption or chemical change. In severe cases of so-called colic, or windy spasm in infants, the writer sometimes practically fills the intestines with petroleum emulsion, either alone or in combination with carbonate of bismuth.

The writer learned the value of large doses of bismuth in these cases when he was investigating the cause of motor disturbance in infants, by means of the bismuth feed and the X-rays. In many of these cases he noticed that the crying and pain subsided immediately after the administration of the bismuth. Since then he has given very large doses of this drug in combination with petroleum emulsion with the greatest confidence and generally with the most gratifying results.

The chief objection to the administration of bismuth in large doses is that its gritty properties make it distasteful to infants; this disadvantage is overcome by using the preparation known as "glycerinum bismuthi carbonatis," a most elegant preparation of milky softness, details for the making of which are given in *The Codex*. One drachm, or even two drachms, of this combined with an equal quantity of petroleum emulsion serves as a most efficient carminative for infants troubled with wind or colic. It may be given independently or combined with the contents of the infant's bottle. A mixture of this kind is a most efficient substitute for meconium, to the important physiological functions of which the writer has repeatedly drawn attention. When this natural intestinal lubricant and antiseptic is by design or accident

discharged from the bowel of the new-born infant, disturbances of motor functions are very liable to supervene. In such cases the free exhibition of this artificial meconium has the most excellent effect in restoring harmony to these functions.

The writer is not prepared to support the statement that petroleum is a powerful antiseptic agent. His experiences in attempting to discover an efficient preservative for his emulsions of paraffin gave the lie to this belief, but all the same there can be no doubt that it does in some degree limit and retard the decomposition of those nutrient media in which it is combined in large proportion. It does so, the writer feels convinced, by coating either the bacteria or the nutriment on which they thrive with an impenetrable film of a substance which cannot mix with, or become incorporated in, the protoplasmic contents of the living cell. The writer knows from experience that the stools of persons who regularly take paraffin are, if not exactly odorless, at any rate far less offensive than when the oil is not taken. This is, however, open to the interpretation that it is quite as much due to the rapidity of transit of food through the intestinal tract as to the inhibitory influence of the petroleum on the growth of the bacteria themselves.

One of the most valuable uses of petroleum is in the treatment of threadworms in children. This, however, hardly comes within the compass of this paper, but the writer refers to it here because he believes that its almost specific action as a vermifuge in such cases is dependent not so much on its lethal influence on the parasites or their eggs as upon its direct influence upon the mucous membrane.

Paraffin in its crude form has long enjoyed a high reputation in cases of catarrhal or diphtheric inflammation of mucous membranes. It has been claimed that pieces of diphtheric membrane when immersed in crude paraffin soon become soft and pliable. On similar grounds it might be supposed that paraffin when applied to unhealthy mucous membrane has a health-giving and cleaning-up influence. In the treatment of chronic catarrhs of the nose and pharynx, the purer forms of petroleum in combination with menthol obtained a very considerable vogue a few years ago, and when applied to the affected mucous membrane in the form of a fine spray by means of a nasopharyngeal atomizer, it affords results which, in the writer's opinion, are not surpassed by any of the more recent methods.

Whether, however, petroleum owes its undoubted efficacy in cases of intestinal disorder to its therapeutic effect on the mucous

membrane or to its undoubted influence on the motor functions of the bowel there can be no question that in cases of threadworm infection it acts by ironing out and cleaning up the crypts or rather lurking places in an unhealthy mucous membrane, in which the eggs have an opportunity to incubate undisturbed.

Although petroleum is, in the great majority of cases, a most efficient lubricant and aperient, nevertheless in certain exceptional instances it undoubtedly predisposes to constipation. This paradoxical effect, which must be familiar to all those who have had much experience of the drug, is, the writer believes, to be explained on the following grounds: In some individuals a regular action of the bowels can be maintained only by the stimulating and provocative action of irritating particles, such as the seeds or husks of fruits and vegetables. In such cases petroleum may predispose to constipation by its emollient influence on the mucous membrane, thus depriving the rectum or its neuromuscular mechanisms of the required stimulation. Such constipation can persist after stasis in the upper reaches of the intestines has been cured by the petroleum, and thus it may do good in spite of the constipation.—*Thera. Gazette.*

News Items

Dr. Norman Wallace, formerly of Alma, Ont., and Guelph, is with Dr. Don. Armour in the Canadian Hospital, London, Eng. Dr. Stewart, of Calgary, is also serving in that hospital.

Recently a bust of the late Dr. Emily Stowe was presented to the city of Toronto by a number of friends. Dr. Stowe was the first woman physician to practice medicine in Ontario.

Hamilton, Ontario, will send the following medical men with the Second Canadian Contingent: Drs. Geo. D. Farmer, Ancaster; D. P. Kappele, William L. Silcox, and William F. Nicholson.

Two of our confreres who have been passing through severe illnesses extending over many weeks' duration, we are glad to say, are recovering nicely. They are Drs. T. B. Richardson and W. John O. Malloch.

At the recent special meeting of the Ontario Medical Council, a resolution was adopted approving the principle of reciprocity with Great Britain. The matter was placed in the hands of the Legislative Committee to bring before the Ontario Government.

The British Foreign Office has accepted the offer of McGill University to furnish a base hospital staff for foreign service. Dean Herbert S. Birkett will be in command, and amongst others likely accompanying will be Professor J. George Adami and Dr. J. M. Elder.

Dr. C. Stewart Wright, for the past three years associated with the Toronto Orthopedic Hospital, begs to announce the discontinuance of that connection and his removal to No. 99 Bloor Street West. He will devote his attention, as formerly, to orthopedic surgery.

By the death of Dr. Alton H. Garratt, in December, Toronto lost one of its well-known physicians. The late Dr. Garratt was a graduate of Trinity Medical College, and was for a number of years on its staff. He was also connected for several years with the Toronto General, St. Michael's Hospital, and the Simcoe Street Dispensary. Dr. Garratt was a very affable and kindly man, and much beloved by the profession. He was a member of the Academy and Aesculapian Club.

Dominion Medical Monthly

And Ontario Medical Journal

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GEORGE ELLIOTT, MANAGING EDITOR

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COMMENT FROM MONTH TO MONTH

The Commission on Medical Education and Medical Practice in Ontario, promised by the late Sir James P. Whitney some two years ago, may issue before, or at the time of, the annual session of the Legislature.

There are not lacking signs that the unlicensed disciples of the all too various cults of exclusive methods of treating the sick will lustily call for legislative licensure.

The ordinary lay mind must view the whole situation in this province with a lively, scoffing humour at the whole screaming farce. One cult denounces the others as parasites upon their quackery. They publish long lists of the elect—those within the pale. The other claims to be the true simonpure, trumpet-tongued and brazen—the pure wine on the lees. They, too, detest the poachers on their preserves. It is impossible to contemplate these abuses but with scorn and indignation.

The position of the provincial University at the present time, the innate desire of all the universities to have complete control over the profession, the rampant quackery, call for a Commission with superlative abilities to make a wide, searching inquiry of affairs medical, in this province.

Editorial Notes

CANADIAN MEDICAL ASSOCIATION

The next meeting of the Canadian Medical Association will be held in Vancouver, July 6-10. The large local committee has already done considerable work in making the necessary arrangements. Dr. Brydone-Jack is Chairman, and Dr. Frederick Brodie, Secretary of this committee.

1,000 CASES OF CANCER OF THE STOMACH

Dr. Julius Friedenwald presents an extremely careful clinical study of gastric carcinoma in the *American Journal of the Medical Sciences* for November, and as it is based on an analysis of 1,000 cases it is worthy of serious attention. About 60 per cent. of his patients were males, and a similar percentage occurred in the fifth and sixth decades. Ulcer of the stomach, on the other hand, falls principally on the third and fourth decades. Heredity did not appear to play any part in over 90 per cent. Dr. Friedenwald thinks that his analysis makes for depreciation of the belief that peptic ulceration is an important precursor of gastric cancer, since even the most liberal interpretation failed to discover symptoms of ulcer in more than three-quarters of his cases. The gastric contents were analysed in 733 cases, and in nearly nine-tenths of these no free hydrochloric acid was found. In a majority of such lactic acid was present, also Oppler-Boas bacilli. Sarcinae were noted in one-third only and "coffee-grounds" in about two-thirds. Occult blood was found in the stools in 92 per cent., and especially in early cases, though obvious melaena occurred in 21 per cent., and haematemesis in 25 per cent. only. Pain and loss of weight were the most constant of symptoms, and anaemia was noted in a large majority. Vomiting occurred in nine-tenths of Dr. Friedenwald's cases; in contrast to the clinical picture of gastric ulcer, both pain and vomiting were notably associated with absence of free hydrochloric acid in the stomach contents. In only one-third was the tumour palpable within six months of the onset. In more than half the cases the growth was pylorie. It is surprising to find that fever was noted in nearly half; it is more often a late than an

early symptom. In a majority the duration of life from the onset of symptoms was less than twelve months. Of 128 patients submitted to operations other than exploratory (gastro-enterostomy, gastrostomy, gastrectomy), not one was living at the time of the analysis. Dr. Friedenwald, therefore, urges earlier exploration, recognizing the desperate nature of the malady and the hopelessness of the prospect in cases where the diagnosis has become apparent from clinical symptoms alone. *The Lancet.*

THE BELGIAN PHYSICIAN

Our Belgian confrères are undergoing trials that no language can even approximately describe. In a few months they have seen their country transformed from a land of peaceful pursuits and prosperous homes into one of chaos and bereavement. Opinions as to the cause of the present war may differ greatly; views in regard to the way in which it is being prosecuted may be widely divergent; but there are few honest, conscientious men who will not agree that the world has seen few sadder spectacles than the devastation of Belgium. Surely if any people have known the acme of misery it is the Belgians. Helpless, forlorn and sick with their sorrows, starvation and cold are all that confront these hopeless people unless the neutral nations of the world give bountifully —and quickly. The movement already under way looking toward immediate relief for this stricken nation is the one bright spot in the situation.

The medical men of Belgium have suffered no less severely than the rest of their countrymen. They are destitute, with their homes, equipment, libraries, everything destroyed and lost. At any rate, the hunger and cold that confront the great mass of the people also confront the doctors. Many have families dependent on them, so their anxiety and anguish as well as their physical distress can easily be imagined.

The plight, therefore, of the physicians of Belgium is terrible indeed. Unless steps are taken at once to relieve their condition, a few short weeks are certain to witness scenes of suffering among our Belgian colleagues that will beggar description.

It has been suggested to us from several sources that *American Medicine* should undertake the collection of a fund for the physicians of this stricken country. We have yielded to the requests of many interested friends and will undertake the collection of an American Fund for Belgian Physicians.

This fund for Belgian physicians will accept contributions not only from American medical men, but from every one who realizes the great and urgent need of the doctors of poor bleeding Belgium. A committee composed of prominent American physicians is being organized, and this committee will have charge of the entire movement: all contributions will be turned over to them as received.

To every physician in America we, of course, make an especial plea for a small contribution to this fund. No matter how small the amount, it will be welcome and help to swell the total. We realize only too well the many demands that we American physicians have to meet in our every-day life. But there is hardly a physician in this great land of ours that cannot contribute fifty cents or a dollar to this fund for Belgian doctors—and never feel it.

We hope every one who reads these words will send in at once —to-day—some small sum—twenty-five cents will be gratefully received.

All contributions should be addressed to the Fund for Belgian Physicians, care *American Medicine*, 18 East 41st Street, New York City.

This committee will work with the Belgian Relief Committee and doubtless arrange with that body to make disposition of the funds collected. In our November issue there will appear a full report giving a list of all contributions, the names of the committee in charge, and detailed information in regard to disposal of funds, etc.

In the meantime, may no time be lost in creating a fund that will bring a ray of comfort and cheer to our sorely afflicted Belgian colleagues.—*American Medicine*.

In connection with the above, Dr. Adam H. Wright, 30 Gerrard Street East, Toronto, will receive and forward contributions.

Publisher's Department

THE PNEUMONIA CONVALESCENT.—While the course and progress of acute lobar pneumonia is short, sharp and decisive, the impression made upon the general vitality is often profound, and apparently out of proportion to the duration of the disease. Even the robust, sthenic patient is likely to emerge from the defervescent period with an embarrassed heart and general prostration. In such cases the convalescent should be closely watched and the heart and general vitality should be strengthened and supported, and this is especially true as applied to the patient who was more or less devitalized before the invasion of the disease. For the purpose indicated, strychnia is a veritable prop upon which the embarrassed heart and circulation can lean for strength and support. As a general revitalizing agent is also needed at this time, it is an excellent plan to order Pepto-Mangan (Gude), to which should be added the appropriate dose of strychnia, according to age, condition and indications. As a general tonic and bracer to the circulation, nervous system and the organism generally, this combination cannot be surpassed.

GERMAN AND FRENCH BULLETS.—During recent wars many observers have been astonished at the apparently comparative harmlessness of the modern rifle bullet, and lately German military authorities have put forward the paradoxical claim that the German projectile is a "humane missile." It is interesting, therefore, to compare the German "S" bullet with the French "D" missile. Both are conical in shape: the German is composed of a hard leaden core with an envelope of soft steel; the French bullet is of solid brass without an envelope, and is the longer and heavier of the two. Up to a distance of 500 yards the German ball has not the penetrating force of the French, but at distances of 1,000 and 2,000 yards it has a distinct superiority. As regards the severity of the wound inflicted, the wound caused by a "*balle ricochée*" is much more serious than that caused by one which has found its billet without interruption of its course. The bullet which ricochets becomes deformed, jagged, flattened out, or separated from its envelope: it strikes the body either obliquely or

transversely, and tears, instead of boring, its way through the tissues. The German bullet, with its leaded core and cuirass of steel, becomes a much more injurious missile after contact with the soil than the French bullet of solid brass. Delorme, in the book we noticed last week, states that one out of every three rifle wounds are caused by *balles ricochées*. Journée has estimated that 25 per cent. of bullet wounds are fatal; 15 per cent. produce grave injury; the remaining 60 per cent. producing only slight flesh wounds. If, thanks to their slender calibre and pointed extremities, the "S" and "D" bullets actually produce a series of 60 per cent. of hits causing only slight wounds, nevertheless it still seems to us to be pushing the love of paradox rather far to call a missile "humane" that can pierce several men at 500 yards, and can exercise a fatal effect at a distance of two miles! In the course of every war one side or another is accused of using explosive bullets: the use of these inhuman missiles has been included amongst the list of German "atrocities." Prof. Delorme authoritatively states he has come across no such instance. He tempers this reassuring statement with the observation that the "humane" richocheting bullet is far more deadly, as an explosive bullet could no longer lay any man low after the slightest contact with the soil. —*The Medical Press and Circular.*

Something New in Emergency Service.—Toronto, Ont., January, 1915. Only a few cities in the world equal Toronto in one form of modern equipment—an automobile emergency service for all accidents or fires where gas is concerned. A motor load of men trained in gas troubles are ready at all times of the day or night to respond to calls much like a police patrol.

The maintainer of this unique service is a large gas company here, which has a fleet of seven Ford automobiles, some being used for the day and night emergency service and some for delivery, etc. The "trouble" car answers fire calls to shut off gas supply, locates leaks, and gives aid in case of asphyxiation or other accidents. Not only have the Ford cars used by the trouble department of this and other gas companies greatly improved service for the consumers, but they have also, through the promptness with which they reach the scene of trouble, been instrumental in saving many lives.

A "smoke helmet" and a "pulmotor" are carried by the emergency autos as a part of their special equipment. The pulmotor

is an appliance for reviving persons who have been poisoned by gases of any kind or who have been rescued from drowning. Although this apparatus has been in use in Toronto only a short time it has had ample opportunity for proving its worth as a life saver. A cup-like arrangement fits over the mouth and nose. Rubber tubes connect this with the pulmotor, and when all is ready, a valve is opened and oxygen is automatically pumped into the patient's lungs.

These emergency cars have nothing whatever to do with ordinary repairs, as the latter are taken care of during business hours by a separate department. Only recently four Ford cars were sold to the gas company at Chatham and one at Windsor, while several other gas companies are using them. Quasi-public corporations depending for their prosperity on the quality of service they can render, have found one of their strongest allies in the automobile, and it is doubtful if they could get along to-day without it any more than they could do business without the telephone.

Corpora Lutea Now Available.—Physicians who have been desirous of prescribing Corpora Lutea, but have been unable to do so through inability of their druggists to supply it, will be glad to know that the manufacturers, Messrs. Parke, Davis & Co., have taken steps to secure sufficient quantities of the glands in future to meet the probable demands of the medical profession.

As is known, perhaps, to most physicians, Corpora Lutea is largely used to control the symptoms following the removal of the ovaries, especially in young women, and to relieve the nervous disturbances attending the natural menopause. Reports have appeared on its successful employment in the treatment of amenorrhea, dysmenorrhea, chlorosis and menorrhagia. It is supplied in desiccated form, in capsules of five grains each, equivalent to about thirty grains of fresh corpus luteum. Only the yellow granular material from fresh ovaries is used in its preparation, the remainder of the gland being discarded because of its lack of therapeutic value.

While comparatively a new product, there is sufficient evidence at hand to warrant the opinion of one writer who expresses the belief that "in Corpora Lutea we have a preparation that will be a blessing to womankind."

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Original Articles

THE DIAGNOSIS AND TREATMENT OF PRECANCEROUS LESIONS OF THE LOWER LIP

By Graham Chambers, B.A., M.B.
Associate Professor of Clinical Medicine, University of Toronto.

The frequency of the occurrence of cancer of the lower lip and the importance of the recognition of malignant disease in the early stages of development makes the subject of this paper of great interest to the general practitioner. At the present time I feel that insufficient attention is given to the clinical study of cancer of the lower lip. My reason for this statement is the frequency in which patients with this malady fail to consult surgeons until the growth is in an advanced stage, with little chance of a permanent cure.

It may be stated that it is generally the fault of the patients; that the patients are usually informed of the condition long before they seek relief. This may be true, but I think that frequently general practitioners are not sufficiently emphatic in their advice to patients. They not infrequently exhibit an uncertainty about the diagnosis when the patient should be told that the condition is malignant, or if lesion is precancerous that it may lead to cancer.

There is another reason why patients do not seek early relief from cancer of the lip, and that is, that many patients are afraid of the "knife." This, according to my experience in practice, is very common. Many are willing to try any form of treatment other than that of removal by excision. Many of them try to obtain relief by the use of cancer pastes applied under the direction of some layman or laywoman. If this fails then later they may consult a surgeon.

This is about the condition of affairs at the present concerning the diagnosis and treatment of cancer of the lip. The question is: How are we to correct these mistakes? It is, no doubt, the duty of medical men to do everything in their power to diminish the mortality of cancer of the lip. Moreover, it is possible to greatly diminish the frequency of the disease; and it is also possible, I believe, to almost diminish the mortality of the disease to zero.

What should we do? The answer may be briefly stated as follows:—

1. General practitioners must be on the lookout to recognize precancerous lesions.

2. General practitioners should adopt measures to cure precancerous lesions as soon as detected.

3. Patients should be educated as to the nature of both the precancerous lesion and cancer. They should know that cancer in the very early stages is generally a curable disease.

In this paper the subject of precancerous lesions alone will be considered.

Microscopically there are at least four kinds of precancerous lesions of the lips:

(1) Scaly localized hyperkeratosis.
(2) Leucoplakia.
(3) Fissure.
(4) Cutaneous horn.

Scaly localized hyperkeratosis.—This is, according to my experience, by far the commonest precancerous lesion of the lip. In the majority of cases it is localized to one part of the lower lip; in a few it involves the whole length. Frequently there is a history of irritation of the part. In some of the cases the lesion is associated with the scaly and crusted patches on the skin known as senile warts; and both the microscopical and macroscopical appearances may be similar. Again, the characteristics of the lesion may be very similar to those of seborrhoeic dermatitis, and not infrequently the lesion on the lip is associated with seborrhoeic dermatitis on the scalp and other parts of the body. In my opinion, however, it is not in the great majority of cases a form of seborrhoeic dermatitis; for the reason that the lesion cannot, as a rule, be cured by the measures which invariably prove successful in seborrhoeic dermatitis. The latter disease may, however, be present on the lip.

In the treatment of these chronic lesions characterized by localized hyperkeratosis, it is a common mistake to attempt to cure them by soothing ointments such as cold cream. The lesion is deeply seated and if an ointment be used, a preparation with a keratolytic action should be selected. According to my experience ointments alone are of little value. An excellent method of treatment is to apply for about a half to one minute the solution of acid nitrate of mercury, and follow this by the application of an anodyne ointment of cocaine or orthoform of sufficient strength to prevent local distress. Physicians who have an X-ray outfit, or radium, may use with advantage these remedial agents. The writer generally uses radium at the present. X-rays are also valuable but are not so easily made use of as radium.

I should like to draw the attention of surgeons to the importance of recognizing this type of precancerous lesions in their operations on the lip. If cancer develops on one of these scaly patches it only does so at one point, and in the treatment the surgeon should recognize the precancerous as well as the cancerous lesion.

Leukoplakia.—This is a disease of the tongue and mucous membrane of the mouth and lips. It is characterized by whitish plaques which are, as a rule, very persistent. A luetic history is a predisposing cause, but the exciting agent is generally some form of irritation such as that produced by smoking. When the lesions first form they are, as a rule, smooth, almost imperceptible to the sense of touch. Later they may become thickened, which sign, in my opinion, may indicate that the lesion is becoming cancerous.

In the treatment one should first remove all sources of irritation. The local treatment, when used, should be directed to destroy the lesion. Mild applications are absolutely useless. I have successfully treated many cases by irradiation with radium preceded by the application of acid nitrate of mercury.

Fissure.—This is generally of benign significance. Occasionally one obtains a history of fissure or sees the lesion in the early stage of cancer. It is a question, however, in these cases whether the fissure does not complicate cancer rather than be a precancerous lesion. In some this is undoubtedly the case for the fissure is in the centre of slightly elevated patches with signs of epithelioma.

In the treatment of fissure it is essential, if there is any suspicion of the beginning of cancer, the treatment should be thorough.

Cutaneous horn.—This is not a rare condition of the lip and is prone to undergo malignant degeneration. When the base of the lesion is degenerating into an epithelioma there is evidence of thickening and infiltration of the horn around the border. In many cases it is difficult without microscopical examination to determine whether or not malignancy is present.

The treatment of cutaneous horn which I have found most successful is irradiation of the base with radium after removing the horny matter. Thorough cauterization of the base with the actual cautery or with a strong caustic would likely prove effective.

26 Gerrard St. E.

NOTE ON THE WOUNDS OF THE SOFT PARTS PRODUCED BY THE MODERN BULLET*

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The time seems to have arrived when an opinion may reasonably be expressed as to the so-called "humane" character of the pointed bullets employed in the present war. Before proceeding to this consideration the protest may be reiterated against the "pure sentiment" which has given rise to the employment of the word "humane" and led to international recrimination between parties who, while advocating the employment of a "humane bullet," do not hesitate to place their main hopes on the use of projectiles portions of which may cut off a head, an arm, or a leg, or lay open the major part of one or more of the great body cavities.

Characters of the Wounds.

The main characteristics of the wound produced by the modern pointed bullet depend on two factors—initial velocity of flight and instability of flight in the long axis of the projectile. Of these two factors the former is of comparatively small importance except in the increased capacity of the bullet to produce extensive comminution of the bones when they are struck at a right angle.

* The Lancet, Dec. 12th, 1914.

In the instability of flight and the tendency of the bullet to revolve around a transverse axis, however, the travelling bullet is endowed with a capacity of wounding the soft parts to a degree which no form of expanding or soft-nosed bullet has exhibited before. A dum-dum or a soft-nosed bullet traversing the soft parts alone seldom acquires any deformation or increased wounding power, and, as far as my own experience of the dangers of the soft-nosed Mauser or Mannlicher bullet occasionally used by the Boers in the South African campaign went, I came to the conclusion that they were practically negligible.

On reviewing a long series of the bullet wounds observed during the last two months of the present campaign I have become more and more impressed with the gravity of a considerable proportion of the rifle and machine-gun wounds, which seem to me to correspond much more nearly with the experimental results obtained by von Fessler and others than with the reports furnished by many of the surgeons working during the Balkan campaign, the majority of whom regarded the wounding power of the pointed bullet to be very similar to that of the older dome or ogival tipped bullets of small calibre. That the pointed bullet causes small, clean apertures of entry and exit when it strikes fairly at right angles, even when travelling at high degrees of velocity, there is no doubt. Such wounds are numerous, although in my experience the cases in which occurs perforation or division of small narrow structures such as the peripheral nerves and arteries are not so common as was the case in wounds produced by the Mauser or Lee-Metford bullet.[1] Neither arterial hematomata nor aneurysmal varices have been frequently seen in the more serious cases reserved for treatment in France, although I am not in a position to know what may have been observed amongst the large number of less severe wounds transferred at once to England. The same remark applies to isolated injuries of individual peripheral nerves, while the larger area afforded by the brachial plexus has resulted in many paralysed arms complicating the very common wound from the base of the neck to the shoulder region, the result of the attitude so often assumed in the fighting during this campaign.

Allowing the capacity of the pointed bullet to produce the small apertures of entry and exit and the narrow intervening canal made by the older bullet, yet it is clear that as a cleanly perforating instrument it needs to strike with extreme accuracy and precision, and if this be not the case wounds of a vastly different character result. A slight inaccuracy of impact causing

[1] The Lancet, Dec. 20th, 1913, p. 1743

only an unimportant increase (or none at all) of the aperture of entry, may result in the production of an "explosive" exit aperture of the extreme type when no bone has been touched and the resistance of the soft parts of the body is alone met with.

Instability of Flight of the Pointed Bullet.

That these wounds are not caused by bullets deformed by ricochet is obvious from the characters of the aperture of entry. On this point it may be added that seriously deformed bullets are seldom extracted, which may depend on the fact that in the recent fighting a large number of the deflected bullets have struck either trees or the soft earth at the margin of the trenches. The more serious ricochets, those from the walls of houses, have been far less abundant. Again, in any case the general outline of the bullet renders it more liable to deflection than to serious deformation unless it meets the opposing object at a very narrow angle.

The ease with which the pointed bullet may be deflected cannot be more aptly illustrated than by examining a number of cases of injury to the head and observing the very great preponderance of gutter wounds over that of tracks traversing the skull, which preponderance (if it existed), was certainly far smaller with the older forms of bullet of small calibre.

The serious nature of the wounds limited to the soft parts can only be attributed to the fact that the instability of flight of the bullet in its long axis is so great that, unless impact with the body takes place by almost the exact tip, a rapid revolution of the bullet on its transverse axis occurs, so that the only slightly diminished force is exerted by the whole lateral area of the bullet on the tissues in the distal portion of the canal and the aperture of exit. If the "remaining velocity" is great this half turn only is probably made; if less the revolution may be complete or even repeated; if the bullet is nearly "spent" it is often retained in a reversed position. The latter is often the case with retained bullets, or their position may be vertical to the course of the wound. The soldiers assert that the enemy sometimes draw out the bullet and reverse its position before firing the cartridge, but even if this be the case it is difficult to believe either that the bullet would travel properly, or that it could account for the many cases of reversed retained bullets met with.

Illustrative Examples.

Evidence of this instability of flight is offered by the appearance of some of the entry wounds; thus, rarely wounds are seen

of the same outline as the lateral surface of the bullet. On the other hand, the oval wound or the partial gutter leading to a penetrating wound often observed in the case of oblique impact in the case of the older bullets is rare and never well marked. The aperture of entry is rather only slightly enlarged, with merely slight bevelling in one half of its circumference and undercutting at the other. The aperture of exit, on the other hand, is very large, in the case of wounds of the soft parts often oval, and less commonly stellate than when the bones have been implicated. In place of a small tag of subcutaneous tissue in the opening a mass of the brush-like ends of torn muscle and other soft tissues protrudes. Such wounds are seen in the extremities without any evidence of implication of the bones. Very striking instances are seen in the abdomen, thus, (1) a normal small entry wound in the right loin, with a vertically oval wound of the anterior abdominal wall four inches in length, the floor of which was formed by the ascending colon, from which faeces were escaping; (2) a normal entry wound over the ascending colon with an oval exit in the right loin, 3 inches by 2, from which urine escaped and extravasated under the skin of the back; (3) a similar wound entering over the descending colon, with exit in the left loin (in this instance the main urinary extravasation followed the line of the ureter into the pelvis); and (4) entry in the anterior abdominal wall, exit in the left loin, with protrusion of a piece of omentum six inches long.

Wounds implicating the thorax scarcely come into the same category, since the presence of a rib at the distal end of the track offers a bony resistance, yet the large valvular openings allowing the free exit of blood and ingress of air which are so often seen were certainly rare in the case of the older bullets.

The chief novelty of the last weeks has been the arrival of men wounded by the modern "hand grenade," which, however, appears to cause more damage to the trench than its occupants.

SOME EXPERIENCES OF SHELL WOUNDS IN THE PRESENT WAR*

By A. W. Sheen, M.S. Lond., F.R.C.S. Eng.
Lieutenant-Colonel, Royal Army Medical Corps (Territorial Force); Officer Commanding Welsh Hospital, Netley.

It takes but little experience of shrapnel and other shell wounds, which, when they get to hospital, are almost always infected, to realize that the best thing to do is to leave them alone—that all aggressive surgery is a mistake, that foreign bodies *per se* do no harm, and that the laying open of fresh tissue areas is to be avoided. Amputations are unwise, simple removal of any nearly dissociated parts being sufficient, even if ends of bone are left protruding. If a previous formal amputation has been performed there is almost always free suppuration and flap retraction, with the necessity for reamputation later.

The best treatment is the boracic fomentation assiduously and properly applied; the lint should be wrung as dry as possible out of really boiling water, put on in at least two layers amply covering the wound and adjacent parts, well overlapped in its turn by the mackintosh, fixed so as to avoid displacement and permit of easy changing, and changed as often as every two hours in badly infected cases. There is no particular virtue in the boracic acid, but the pink color of the lint emphasises its special use.

Where there is a wide wound, locally very foul, but with no spreading or general infection antiseptic sawdust[1] is a good dressing. When leaning over the bandage and smelling there is not the offensive odor of other dressings, but only a fragrant smell. The sawdust is best applied over a single layer of sterile gauze laid across the wound. The corners of the gauze are then brought over the sawdust. The dressing should be changed at least twice daily. "Pinus sylvestris medicatrix" is an impressive name for the soldier. The use of gauze plugs, sterile or medicated, is wrong; they become intensely foul, and cork up discharge. Drainage-tubes are only very occasionally necessary.

The employment of congestive treatment other than the fomentations—Bier's bandage or Bier's cup—should follow the usual

* The Lancet, January 2nd, 1915.

[1] Prepared according to Mr. Rushton Parker's formula by Messrs. Sumner and Co., Liverpool. (See Brit. Med. Jour., Oct. 31st, 1914.)

principles of dealing with infected wounds. A high value is placed nowadays on peroxide of hydrogen, but I cannot satisfy myself that it has any special usefulness in these cases. It is very difficult to estimate the value of medications applied to wounds in removing infection and hastening repair, for cleansing and healing usually take place rapidly under congestion and natural processes.

Granulating and mildly infected wounds do well under sterile gauze wrung out of warm "parabolic" applied twice daily. Sterile wounds require a dab of tincture of iodine and a pad of sterile gauze daily or less often. Occasionally an obvious abscess requires opening, an ill-draining sinus enlarging, or a cellulitis incising. In the absence of constitutional disturbance it is well to wait for definite evidence of these conditions. Doubtful spots should not be incised if the temperature is normal.

The best procedure in ward dressings is as follows. The "dresser" wears rubber gloves throughout, the lotion is warm "parabolic" 1 in 40, parabolic being one of the British equivalents of the German lysol. Between each dressing the gloved hands are washed in soap and water and rubbed with the lotion. Wool dabs are used in the lotion, gloved hands rinsed in it, and instruments kept in it. The whole process is simple and expeditious. Bare hands get infected and infect clean cases. Fresh rubber gloves for each case are unnecessarily time-consuming and costly. To use sterilized gauze for mops in these infected cases is unnecessary.

The prolonged hot iodine bath for limbs is very useful; three or four hours at a time alternating with the fomentations. Whilst in the bath the patients are encouraged in the use of muscles and joints.

I am accustomed to say in speaking of limb injuries "Do not think of the wound, think of the limb below it. Endeavor to minimize the crop of cripples which this war will bring forth." Everything possible must be done to prevent stiff joints, atrophied, paralyzed, glued-together muscles, lengthened tendons, loss of grasp, dropped hands, and dropped feet. Later we shall have war hospitals which by electricity, by massage, by hot-air baths and by mechanical and surgical methods are endeavoring to cure what might have been in many instances prevented by carrying on side by side with the wound treatment, treatment calculated to restore the usefulness of the limb.

The patients must be stood over at the time of their dressings and carefully and methodically put through different movements and exercises. With the arm, for example, the patient is told to

use every endeavor to make this or that movement, to make finger meet thumb, to flex and extend the wrist, to pronate and supinate, to grasp, to separate and close together the fingers. It is explained to the patient that all this painful exertion is for his own good, and to give him a useful limb later.

Splints should be designed to keep a limb in its most useful position and to prevent tendons lengthening. In wrist drop, for example, arm splints are prolonged by a piece attached at an angle which dorsiflexes the palm, leaving the fingers free. The arm extension splints of Borchgrewink, for my knowledge of which I am indebted to Mr. E. W. Hey Groves, of Bristol, are occasionally useful, but it is difficult to apply the extension strapping in the presence of a septic wound.

Shell fragments require removal when infection in the wound has practically ceased, or if it is obviously the fragment which is keeping up the infection. They will not usually remain in permanently, wounds which have apparently healed breaking down again. Not infrequently a bit of clothing comes out with the fragment. Although the nearness to the skin of the missile in deep injuries may sometimes be due to its "working its way out," yet I think there is a condition which may be called "shrapnel recoil," the missile hitting bone and then springing back. In an officer hit by a fragment of shell, which went through the temporal muscle and completely fractured the temporal bone, the X-ray and operation showed the fragment close under the skin near the entrance wound.

Head wounds should not be left alone in the same way as others, as South African experience taught: they should, except in obviously trivial superficial injuries, be explored, as there may be deep damage to bone or brain, although no definite immediate symptoms are present.

The rule at this hospital is that every infected gunshot wound of less than ten days' duration which has not yet had a prophylactic injection of tetanus antitoxin shall have one. So far there has been no case of tetanus, but I heard that the British army had passed out of the "tetanic belt"—i.e., the richly manured soil area—before this hospital began to receive patients. The bacteriological investigation of all septic wounds admitted has been carried out by my colleague, Lieutenant B. G. Klein, R.A.M.C. All the shell wounds have been infected, many of them badly, and having a very foul odor. The predominant organism is a streptococcus, mixed often with anaerobic bacilli. Stock serum and

autogenous vaccines have been used with apparent benefit in some cases.

X-rays are used in all cases, even where entrance and exit wounds show that the projectile has passed through, for shell fragments or foreign bodies carried in may be left behind or there may be unsuspected bone damage. An officer who showed shrapnel entrance and exit wounds subsequently had removed from his leg a portion of the buckle of a leather gaiter. The cross-thread localizing apparatus is too tedious and tiresome for ordinary use: I wonder to what extent it is used in war hospitals that have provided themselves with it. Localization is usually adequately obtained by photographs in two planes. The telephone probe forceps as modified by me has proved occasionally useful.[2]

A detailed clinical history ascertained by a series of routine questions is of value in revealing unsuspected details and for collective investigation of cases. The length of the missile track is measured by a pair of obstetric calipers. Without careful investigation a third wound, and so a lodged missile, may be missed. A man had entrance and exit wounds on the inner side of the right thigh; he said that he had been told in another hospital that there was no bullet in him. There was tenderness in the right side of the scrotum and a tiny wound at its posterior part: a deformed bullet was extracted anteriorly under local anæsthesia. Convenient terms for different wounds are: "gutter wound," "subcutaneous channel wound," "traversing wound," "double traversing wound," and "lodging wound." A rough drawing, or the marking of wounds on a clinical diagram, adds much to the value of the description of a case.

Arm wounds are common. The men are hit in the trenches, where only the arms and head are exposed. The head wounds are often fatal; hence the frequency of arm wounds. Compound comminuted fractures of the humerus are frequent. Leg wounds are often inflicted when running; they are occasionally across both thighs, and may involve the scrotum; the sciatic nerve is sometimes bruised, producing dropped foot or sciatic neuritis. All the many complications of severe head injuries are observed. Superficial wounds of the head may produce unconsciousness lasting for several hours. Temporary loss of speech and hearing lasting several days may follow a shell explosion near the patient.

With penetrating chest wounds pyopneumothorax occurs. No penetrating abdominal wounds by shell have so far reached this hospital; such injuries are probably usually fatal.

[2] Journal of the Royal Army Medical Corps, April, 1905.

Typical skiagrams are appended. They were taken in the X-ray department by Lieutenant Klein. (See *Lancet.*)

The following case of traumatic aneurysm is of special interest.

Shell wound of calf: fragment in medullary cavity of tibia: traumatic aneurysm.—The patient, a sapper (R.E.), was wounded on October 18th by a shell bursting near him. His own field dressing was applied within five minutes. He was admitted to the Welsh Hospital on November 8th, three weeks after his injury. In the upper part of the right calf was a large pulsating swelling with thrill and bruit; there was no pulse in the posterior tibial at the ankle; the foot was somewhat cold and pale. Antero-posterior and lateral skiagrams showed shell fragments apparently in the medullary cavity of the tibia. Scar of entry wound seen.

Operation was proceeded with on November 13th (tourniquet). The aneurysm was laid open by a long vertical incision through the calf muscles. It was found that both the posterior tibial artery and vein were wounded; a number of branches and tributaries had to be tied which occur in this situation. A long length of the posterior tibial nerve was held on one side to safeguard it. A hole in the tibia was enlarged and the shell fragments found free in the medulla one and a half inches below point of bone entrance. The wound was closed with drainage and it healed aseptically, the man leaving the hospital on sick furlough on December 14th, recovered except for slight weakness of leg.

I am indebted to my colleagues, Lieutenants F. Armstrong, J. S. Rowlands and T. Garfield Evans for their careful observation of cases which has helped in the preparation of this paper.

Netley.

MEDICAL NOTES ON ENGLAND AT WAR *

By Sir William Osler, Oxford, England.

To the Editor.—I dare say my many friends in the United States and Canada would like to have a few notes on my recent experience during these busy months.

It has been an extraordinarily interesting sight to watch the transformation of a peaceful commercial country into an armed camp. As regards soldiers, four months ago England was in the same blissful condition as the United States. One knew there was an army, but a soldier was never seen. To-day khaki is the "only wear," and there are more than 1,000,000 in training, and some 300,000 at the front—a larger expeditionary force than England has ever had on the Continent. And there is a fine spirit abroad. Everyone is working, the Irish question is dead, an intense pride has been raised in the army, there is every confidence in the navy. At the first blush it really looks as if war were a good thing, a fine tonic to the country at large; but behind all this is the tragedy of the shambles at the front, and the hospitals are full of poor fellows battered and shattered, so that one has not to go far to realize the truth of Sherman's famous words that "War is Hell."

For the medical work England was not wholly unprepared. The lessons of the South African War sank deeply and gave a good many men now in the prime of life a most helpful experience. Then in the reorganization of the territorial army five or six years ago the country was divided into military districts, in each one of which a base hospital was organized. Thus Sir Alfred Keogh, the Director-General, and Colonel James came here, met the profession, explained the details of the reorganization, and left the matter in the hands of a committee who nominated the staff, selected the buildings, and arranged for nurses. This was all on paper, but the skeleton was laid down, and the large examination schools selected as the hospital. The plans for the alterations had been prepared, and life had been kept in the organization by an annual meeting. And so it turned out that within two weeks after the order for mobilization, Colonel Ranking, the administrator, had the schools ready for a hospital of nearly 500 beds, and a staff

* Correspondence to J. A. M. A.

organized. The same has taken place in the other centres throughout the country, so that ample accommodation was provided, both for the sick among the territorials and Kitchener's new army, and for the wounded who soon began gradually to be sent back from the front. At present in Oxford there are nearly 1,000 beds available, as the town hall and the workhouse have been added and about eighty beds provided at the Radcliffe Infirmary. Up to date, between 2,000 and 3,000 wounded have been treated.

Private enterprise has also furnished excellent hospitals. The Committee of American Ladies in London has opened the American Hospital at Paignton, near Torquay in Devonshire, in the splendid house handed over to it by Mr. Paris Singer. There are 200 beds, and an additional sixty beds will be provided. The work is in charge of Dr. Beal, of the American Red Cross.

The Canadians resident in London have opened a hospital near Shorncliffe, which is in charge of Dr. Armour and myself, in a house provided by Sir Arthur and Lady Markham. The resident surgeons are Dr. Wallis, of Guelph, and Dr. Stewart, of Calgary. Miss Macmahon, of Toronto, formerly one of the assistant superintendents at the Johns Hopkins Hospital, is in charge with a group of Canadian nurses.

From the base hospital in Oxford the convalescents flow over to Blenheim Palace, the library of which has been converted into a ward for sixty patients, and to Lady Wantage's at Lochinge, and to Mr. Mortimer Singers' at Milton Hill. The latter is one of the most ideal hospitals I have ever seen. Mr. and Mrs. Singer were about to move into their newly arranged house, but have converted it into a hospital for 150 beds, and are providing everything for the comfort of the soldiers.

In Cambridge, Birmingham, Bristol and London large hospitals have been opened, and many of the Metropolitan hospitals have set aside a certain number of beds, so that one may say that the accommodation throughout the country, both as regards hospitals and convalescent homes, is ample.

Altogether, the health of the troops in the training camps has been excellent, and, fortunately, until recently the weather has been good. Up to date there has been no typhoid to speak of. Inoculation is not compulsory, so that a number of us have been going about the camps lecturing to the men, the large majority of whom have readily submitted to inoculation. The country districts in England are singularly free from typhoid, so that there is not much risk of widespread epidemics in the camps, and in the British expeditionary forces there have been very few cases. There

has only been one case at Paignton, and only four or five here. I saw a couple in the hospitals at Brighton. In these first four months of the war we may say that typhoid has played no part. Major Russell's recent figures of the results of inoculation in the American army have been of great value in convincing officers of the value of the procedure.

The outstanding medical feature of the campaign in France and Belgium is that wounded, not sick, are sent from the front. So far, disease has played a very small part and the troops have had wonderful health, in spite of the exposure in the trenches. The damage has been from the pointed bullet, the round shrapnel bullet, and from fragments of the shrapnel case, and the severity of the wounds caused are in this order. From the military point of view, the modern bullet is not a very effective agent. At the right spot it kills; but it may pass harmlessly through head, chest or abdomen, and may splinter a bone without causing sepsis. The orifices of entrance and exit are small, heal rapidly, and the high velocity appears to sterilize the tract. I have seen one case of bullet through the frontal lobes, four through the chest, and two through the abdomen without serious symptoms. The chest cases are of special interest, as one would not think it possible for a bullet to pass through pleura and lung without damage. At Paignton there have been three cases without pleurisy or hemothorax. In one the bullet entered the second right interspace, passed through the anterior mediastinum and the margin of the left lung and came out in the second interspace, about four inches from the left sternal border. Cough and hemoptysis followed, but the patient rapidly recovered. In another man the point of entrance was to the left of the nipple and the exit below the angle of the right scapula. He spat blood at first, but when I examined him about two weeks later there was no friction, flatness or effusion. A Belgian at Shorncliffe, wounded a week previously by a bullet through the right lung, had the same negative features. The patient in the next bed had hemothorax, with moderate fever, from a bullet which had passed through the right lung at the level of the fourth rib. When hemorrhage follows, there may be fever at first, though not necessarily, and if left alone, the symptoms subside, the clot organizes, the plasma is absorbed, and the affected side becomes immobile, with narrowed interspaces and even rapid contraction.

It would not seem possible that a bullet could go through the abdomen without doing any harm, but a Highlander at the base hospital, Oxford, had the wound of entrance about two inches to the left of the navel and the exit about three inches from the spine.

He had had no abdominal symptoms, but had a bad shrapnel wound of the leg. In another man at Paignton the bullet entered from behind, and the roentgenogram showed it not far from the navel. No symptoms followed. The modern rifle bullet may leave a clear wound which quickly scabs over and heals rapidly. A Belgian student at Shorncliffe had a bullet through the bridge of the nose — fortunately a good-sized one— with little or no damage except a frontal sinusitis. The round shrapnel bullet does more harm, with a bigger orifice and a larger, and sometimes rugged, exit. This is an artillery war in which shrapnel does the damage, tearing flesh, breaking bones, and always causing jagged, irregular wounds. And here comes in the great tragedy—sepsis everywhere, unavoidable sepsis! The conditions on the battlefield have made it impossible always to give first aid, and within twelve and twenty-four hours the ragged open wounds have become infected from the clothing or the soil. The surgeons are back in the pre-Listerian days and have wards filled with septic wounds. I have seen sights that remind me of student days at the Montreal General Hospital when all the compound fractures suppurated, and we dressers really had to dress wounds. It may be possible to improve conditions, and already the transport of the wounded from the front has been hastened, and measures are being taken to provide simple antiseptics; but the wound of shell and shrapnel is a terrible affair, and infection is well-nigh inevitable. It is surprising what may be done in some of the worst cases. Among the first batch of German wounded admitted to the Oxford base hospital was a man with high fever, right hemiplegia and aphasia. He had a large wound of the skull on the left side. I saw him with Mr. Whitelocke, as meningitis was feared, but after the wound was freely opened and a part of a bullet and a bit of his cap were removed, the temperature fell, the paralysis cleared, and he has made a complete recovery. An interesting point is the extent of suppurating surface that may exist without fever so long as free drainage exists. It is, however, a slow tedious business, with a type of wound demanding much nursing and dressing. Two points then stand out prominently the comparative mildness of the wounds of the high-velocity bullet, and the wide-spread prevalence of sepsis in the crusted and lacerated shrapnel wounds.

Two other infections have caused trouble. The fighting has been in highly cultivated districts where the tetanus bacillus thrives, so that many cases have developed. At first there was not sufficient antitoxin, but now it is given at the front as early as possible. There have been only two deaths here among seven cases.

At Paignton two very severe cases recovered. The intrathecal method as warmly recommended by Park has been used. The other infection is more serious, an emphysematous wound gangrene, due to an anaerobic gas bacillus. It appears within the first four days of the injury and may prove rapidly fatal by sepsis. The emphysematous swelling, the spreading discoloration, gaseous discharge and terrible odor make the diagnosis easy. The phlegmon bacillus of Fränkel is a widely distributed organism, and infection probably comes from the soil.

There will be countless opportunities of studying lesions of the nervous system, particularly of the peripheral nerves. I have already seen several cases of severe neuritis of the type described in the monograph of Moorehouse, Mitchell and Keen, with great swelling. One patient at the American Hospital with a clean bullet wound high up on the inside of the arm has complete loss of power of the arm, with agonizing pain and great swelling. Later, it would be worth while for the government to concentrate these cases in one large hospital, as was done during the Civil War, and gave the authors just named their great opportunity. Perhaps the case that has interested me most was a paraplegia spastica cerebralis. The man, a private in the Lancashire Fusiliers, had a bullet wound at short range, which ploughed along the parting of his hair for about 3 inches, grooving the bone. It happened on September 13th, and he was unconscious for a time, had loss of power in the legs and was carried into the cart. He gradually recovered the use of his legs, but has developed a spastic gait, with great increase in the reflexes. Another point of interest is the paralysis of the flexors of the feet, with some wasting. This makes the gait very remarkable, a combination of the spastic and steppage. No doubt here there was a bilateral hemorrhage, and an anatomic condition similar to that which occurs in Little's disease.

At the Beechborough Hospital there was a remarkable spurious aneurysm, in a Belgian shot through the right cheek; the bullet passed through the mouth, under the jaw beneath the skin of the neck, and was just below the left clavicle. The cervical triangle was filled with a pulsating mass, without thrill or bruit. It appeared to be a traumatic aneurysm, but Dr. Armour removed the bullet, relieving the tension, and the pulsation has gradually disappeared. It was probably hematoma with communicated pulsation. At Paignton there was an arteriovenous aneurysm of the left brachial which seemed doing very well at first, but then began to increase rapidly, so that Dr. Beal did an Antyllus operation.

Considering the distance that the wounded men have had to travel; from the front to the clearing hospital, then by ambulance train to the base hospitals, by ship to one of the ports, then by train or motor ambulance to the general hospitals—well termed a *via dolorosa*—their condition has been remarkable. The mortality has been everywhere very low.

I am sure your readers would like also to hear of the work which is being done to help our Belgian colleagues who have suffered so terribly. Within a week after the fall of Louvain one of the professors called and told such a sad story of their plight that we organized a university committee to offer hospitality to any who cared to accept, and my wife wrote at once to her friends in the United States asking for help. There are now sixteen Belgian professors here, with their families numbering nearly 100, for whom have been provided houses or lodgings, and who are given monthly grants for their support. The money for this has very largely come from our friends in the United States; and I would like here to express the indebtedness of the committee to Dr. J. William White, of Philadelphia, and to Mrs. Futcher, of Baltimore. The financial position has been greatly relieved by the kind offer of the Rockefeller Foundation to subsidize any science professors who wish to continue their work at English universities. The two most distinguished medical professors are Professor Denys, who is working in the laboratory here, and Professor Van Gehuchten in the Research Hospital at Cambridge, both from Louvain.

Oxford, December 4, 1914.

Dominion Medical Monthly

And Ontario Medical Journal

Published on the 20th of each month for the succeeding month. Address all Communications and make all Cheques, Post Office Orders and Postal Notes payable to the Publisher, GEORGE ELLIOTT, 219 Spadina Road, Toronto, Canada.

Vol. XLIV. TORONTO, FEBRUARY, 1915 No. 2

COMMENT FROM MONTH TO MONTH

Relief of the Belgian Medical and Pharmaceutical Professions has been undertaken in Canada by the organization of the Canadian Central Executive Committee. The committee chosen is a representative one, but it is obvious to be workable the large majority of the members thereof must of necessity be chosen from the two professions in Toronto.

On other pages, our readers will find the particulars set forth with the names of the Chairman, Treasurer and Secretary.

In the medical profession Belgium had some 4,800 members, of whom something like 3,500 to 4,000 or more are said to be destitute. Not only are their homes gone, ransacked, plundered, burnt up, but their surgical instruments, etc., stolen or destroyed by the brutish soldiery of the enemy.

That the response to this urgent call will be a generous one, we have no doubt.

"The Lack of any Systematic Organization among the Medical Men of Canada" is a clause in the communication of the Secretary of the Committee, which may well be brought home to the hearts of the profession in Canada.

It is quite true we have many medical organizations in Canada, from the Canadian Medical Association and the Dominion Medical Council down, but the fact remains, as the Secretary states it, there is an absence of a systematic organization. If this is so, and it is quite easy to believe it so, then the sooner we set about setting our medical house in order, the better it will be for ourselves.

It is quite natural to turn to the national medical association at such a time, and ask the question: How was it, or is it, that the Canadian Medical Association was not appealed to in this emergency? Can it be that the Canadian Medical Association is not sufficiently recognized abroad as the representative medical body of Canada?

Is it possible that we have too many medical bodies, and not enough cohesion amongst the profession in Canada as a whole?

It begins to look as though the Canadian Medical Association had not finished its work—complete re-organization, which was commenced at Halifax in 1905—a complete re-organization which still lags superfluous on the medical stage.

It is doubtful, however, if anything will ever be done towards "a systematic organization of the medical men of Canada," until a whole-time officer is at the helm.

Editorial Notes

CANADIAN CENTRAL EXECUTIVE COMMITTEE FOR THE RELIEF OF THE BELGIAN MEDICAL AND PHARMACEUTICAL PROFESSIONS

Editor, *Dominion Medical Monthly*, Toronto:

Dear Doctor,—The committee organized here for the purpose of raising funds for the distressed physicians and pharmacists of Belgium, has directed me to write each of the Canadian medical journals, setting forth what has already been done.

Following the experience of the Red Cross and the Patriotic Funds, it was felt best to have one Central Committee for Canada, with a small executive, composed largely of Toronto men, in order that meetings might be called with the least inconvenience. You will find a list of the committee enclosed.

You will notice that the names of practically all the Presidents of the Provincial Councils are omitted; the reason being that we have as yet, been unable to obtain them. Such a list apparently does not exist in Toronto.

Circular letters have been sent out to about seventy-five presidents of medical societies throughout Canada—all of which it was possible to obtain record, asking that the president call a meeting of his society and organize in such a way, as to secure as large a response as possible from his district. The committee having this matter in hand have been greatly impressed with the lack of any systematic organization among the medical men of Canada. There is, apparently, absolutely no machinery through which they can be rapidly interested, in any matter of common interest or protection. We have been assured of the ready co-operation of the medical journals. This assistance is greatly welcomed, as being likely to interest a large community unable to be reached in any other way.

A copy of the circular issued is enclosed; you will notice the executive has been increased and otherwise altered since this was printed.

Very sincerely,

Walter McKeown.
Secretary.

Dear Doctor,—At the request of Sir Rickman Godlee, of London, a meeting was held and a Central Executive Committee for Canada appointed to undertake the raising of funds to assist the Belgian physicians and pharmacists who are in dire distress.

We will co-operate with Sir Rickman Godlee's Committee for Great Britain and Ireland, and the Committee in the United States and other countries which are neutrals or allies in the war.

Our Committee considered the best way to get at the entire profession in Canada would be to have associated with us on this Committee the President of the Canadian Medical Association, and the Presidents of the various Provincial and County Medical Associations, as well as the Presidents of the Medical Societies in the various centres, and the Deans of the Medical Colleges throughout Canada, with the addition of representatives of the Canadian pharmaceutical profession.

That some immediate help is urgently needed will be made evident by reading the enclosed copy of a letter from Prof. Jacobs, the delegate from the Belgian Committee having similar aims. The Belgian Committee will act as the intermediaries through which the help will be sent, and are now despatching to Belgians in portable form, packets of medical and pharmaceutical material, as well as surgical instruments.

This appeal for funds to the medical and pharmaceutical profession is to enable Belgian practitioners and pharmacists to carry on their work effectually, as soon as military and political circumstances will permit. Further money is required to help the refugee Belgian doctors in England, most of whom have nothing in this world left to them.

Will you undertake to arrange a meeting and the appointment of a Local Committee, at as early a date as possible, to raise subscriptions from the physicians and manufacturing and retail druggists in your locality. Subscriptions collected should be forwarded to the Hon. Treasurer of the Central Executive Committee, Dr. D. J. Gibb Wishart, 47 Grosvenor Street, Toronto.

Should circumstances not permit your active participation, may we ask that you so inform us at as early a date as possible, that we may appoint a substitute to undertake the work in your district.

Any amount that the doctors or druggists feel like contributing will be gratefully accepted. For your information we might say that many of the medical men here are contributing $25.00, others $5.00 and $10,00, but any subscriptions of a smaller

amount would be equally acceptable. As the need is urgent, we hope you will give this matter as early consideration as possible.

Yours sincerely,

H. A. Bruce,
Chairman.

Walter McKeown,
Secretary.

Executive Committee.

Chairman: Herbert A. Bruce.
Hon. R. A. Pyne, Minister of Education.
R. E. McKechnie, President Canadian Medical Association.
James McArthur, President College of Physicians and Surgeons, Ontario.
Col. Sterling Ryerson, President Canadian Red Cross Society.
H. B. Anderson, President Academy of Medicine, Toronto.
G. E. Gibbard, Editor *Pharmaceutical Journal.*
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Clarence L. Starr.
D. J. Gibb Wishart, President Ontario Medical Association. Treasurer, 47 Grosvenor St., Toronto.
Walter McKeown, Secretary, 7 College St., Toronto.

General Committee.

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C. K. Clarke, Dean Toronto University.
J. C. Connell, Dean Queen's University.
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H. H. Chown, Dean Manitoba University.
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John Ferguson, *Canada Lancet.*
W. A. Young, *Canadian Journal of Medicine and Surgery.*
Geo. Elliott, *Dominion Medical Monthly.*
Andrew McPhail, *Montreal Journal Can. Med. Assn.*
Duncan Anderson, *Public Health Journal.*

CANADIAN MEDICAL ASSOCIATION MEETING, 1915

Arrangements for this meeting always involve an enormous amount of work and this year with war and hard times perhaps more than usual. Vancouver, however, is making splendid progress with the programme and, as far as the personnel of those taking part is concerned, is in no way behind former meetings.

For attendance British Columbia will, of course, have to depend upon the other provinces, but Vancouver offers so many attractions that there should be no falling off there.

The Panama Exposition will bring a large number of visitors to the Coast this year and special rates are being arranged to include both attractions at a very low figure.

The two symposia on "Chronic Arthritis" and "Chronic Infection of the Kidney" should afford most interesting discussions, and already a number of papers have been promised by leading physicians and surgeons.

In an early issue we hope to give the provisional programme. The date is fixed for July 7th, 8th and 9th and will come at a time when most people are thinking of holidays, and should be a good opportunity of combining pleasure and profit.

RELIEF BELGIAN MEDICAL AND PHARMACEUTICAL PROFESSIONS

Dr. H. A. Bruce, $50; Dr. D. J. Gibb Wishart, $50; Mr. P. C. Larkin, $50; Dr. R. A. Reeve, $25; Dr. K. McIlwraith, $25; Dr. King Smith, $10; Dr. Geo. Porter, $5; Dr. Powell, $10; Dr. C. A. Warren, $5; Dr. W. H. Harris, $25; Dr. R. C. Griffith, $10; Dr. E. R. Frankish, $5; Dr. E. R. Hooper, $5; Dr. J. G. Caven, $5; Dr. T. A. Davies, $5; Dr. W. H. B. Aikins, $25; Dr. Mortimer Lyon, $5; Dr. Robert Home, $5; Dr. E. A. P. Hardy, $5; Dr. A. O. Hastings, $15; Dr. G. P. Sylvester, $5; Dr. Gordon Rice, $5; Dr. Allan Baines, $10; Dr. A. J. Johnston, $5; Dr. B. E. McKenzie, $10; Dr C. J. Currie, $5; Dr. C. E. Treble, $10; Dr. C. S. Hawkins, $5; Dr. J. H. McConnell, $15; Dr. F. A. Cleland, $10; Dr. A. T. McNamara, $5; Dr. W. J. Defries, $5; Dr. G. H. Gardiner, $5; Dr. C. W. Clendenan, $5; Dr. S. Moore, $5; Dr. J. R. Serson, $5; Dr. W. A. Burr, $1; Dr. J. W. Wigham, $1; Dr. H. R. Holme, $5; Dr. J. M. Cotton, $25; Dr. W. A. Cerswell, $5; Dr. H. J. Hamilton, $25; Dr. R. T. Noble, $15; Mrs. Mabel B. Irish, $25; Mr. R. A. Thomas, $10; Dr. W. A. Young, vaccine to the amount of $100.

Reviews

Fever: Its Thermotaxis and Metabolism. By Isaac Ott, A.M., M.D., Philadelphia. Price, $1.50. New York: Paul B. Hoeber.

This small book consists of three lectures delivered before the Sophomore Class of the Medico-Chirurgical College of Philadelphia. The author claims to have made a special study of the subject for forty-five years, as a practitioner of general medicine and a physiologist.

International Clinics. Edited by Henry W. Cattell, A.M., M.D. Volume IV. Twenty-fourth series, 1914. Philadelphia and London; J. B. Lippincott Company; Canadian Agent, Mr. Charles Roberts, 201 Unity Building, Montreal.

From the standpoint of Diagnosis and Treatment this is an excellent volume, there being no less than sixteen articles in this section. There are three in Medicine, seven in Surgery, two Medico-Legal and one on Medical Illustration. As usual there are many fine illustrations, several being in colors.

DOCTORS' OFFICE TO RENT

Any physician who is willing to share with other members of the profession, a private house on College Street (specially adapted for several doctors) within a block of Toronto General Hospital, may obtain full particulars by addressing the Editor of this journal. The only reason that there is a vacancy is owing to more than one of the former members having joined the colors.

News Items

Dr. R. W. Shaw, London, Ont., has been elected chairman of the Board of Education of that city.

Dr. Alex. McKay, Toronto, has been appointed Chief Medical Officer of the Toronto Board of Education.

Sir William Osler has tendered his services to aid the McGill Base Hospital which will go to the front in the spring.

The Ontario Medical Association meeting at Peterboro May 25th, 26th, 27th and 28th, 1915, should be kept in mind.

The Royal Victoria Hospital, Montreal, admitted 5,617 patients in 1914. There were 370 deaths. The cost of each patient was $2.20 per day.

Dr. H. R. Casgrain, Windsor, Ont., a past president of the Ontario Medical Association, will accompany the second contingent in command of a Field Hospital.

Dr. George R. McDonagh, Toronto, has gone on his annual trip to southern climes. During his absence this season his office is being kept open and patients attended to by Dr. Edmund Boyd.

The resignation of Dr. Hutchinson, medical officer of Health, London, Ont., is announced. Dr. J. W. S. McCullough, of the Provincial Board of Health, has conducted an inquiry which has been laid before the Provincial Secretary, the Hon. Mr. Hanna.

Dr. R. W. Bell, of the Ontario Board of Health, at the request of the Indian Department at Ottawa, recently conducted an investigation into the smallpox outbreak on the Indian Reservation on the Grand River at Brantford. He found over sixty cases, and recommends a general vaccination of the 47,000 inhabitants of the Reservation.

Dr. Andrew Hunter has been appointed to the chair of pathological chemistry in the University of Toronto, in succession to Professor J. B. Leathes who resigned some months ago and went to Sheffield University, England. Dr. Hunter is a graduate of the University of Edinburgh, was associated with Professor E. A. Schaefer for three years, then went to Cornell University, and subsequently became biochemist to the United States Public Health Service.

Publisher's Department

EXHIBITION OF PHOSPHORUS.—In "Ovaltine" the physician has at his service a means to the easy and adequate administration of Phosphorus. In such conditions as neurasthenia, general debility and pulmonary tuberculosis, where disintegration of the tissues exceeds integration, phosphorus is deficient, and therefore if an easily digested and assimilable form of phosphorus can be presented, some advance has been made for the treatment of such cases.

"Ovaltine" is a food rich in phosphatides mainly in the form of Ovo-Lecithin, and as evidence seems to point to questionable value of inorganic phosphorus, and the ready absorption of organic forms, in "Ovaltine" we have a convenient, inexpensive and pleasant form of administrating this important and valuable element.

PUBLIC HEALTH OFFICIALS AND THE WAR.—When Sir Alfred Keogh suggested six years ago that a sanitary service should be formed from the ranks of the principal medical officers of health in the country in order that the troops might have the advantage of their expert services in times of emergency his proposal met with approval on all hands. It is true that it has not been found necessary to mobilize the entire service, and for very good reasons. At the same time individual members have been called up and are engaged in work which is of the greatest service to the country. Their duties are not of a light character, and they are associated with large responsibilities, causing anxious thought and requiring knowledge of a special character. With respect to nearly every one of those medical officers of health who have been called upon to act in the manner indicated, the local authorities they serve have without the least demur given willing consent, and have realized that they must, in common with others, make some sacrifice for the common good. This is not the time to enter upon new municipal enterprises with the country valiantly struggling for its very existence, and the sensible members of local authorities are giving expression to this opinion and acting upon it, though we regret to learn that the Local Government Board does not

appear to be altogether in accord with this view, and is insisting in some quarters that "business shall be carried on as usual." This is all very well from a sentimental point of view, but it is sheer folly to lay it down as a hard and fast principle. The first duty of every local authority is to see that every man of military age in its employ shall take a place in the ranks of our army or navy, even though the special civilian work he is engaged in has to be neglected, and we cannot believe that the military or naval authorities can approve of other Government departments acquiescing in a policy which shall lessen the effectiveness of our forces. We do not think for a moment that there is any real conflict between the military and civil departments of the Government, but the varied communications received by local authorities are sufficient to cause uncertainty in the minds of individual members. For example, the Army Council writes and asks that every facility should be given to ex-non-commissioned officers in the employ of an authority to re-enter the army, and a sanitary officer, say, who is included in this category is willingly given permission to rejoin the colors. There promptly comes down a communication from the Local Government Board with an enquiry as to what arrangements have been made to carry on the officer's duties during his absence. The impression given by this later communication is that the authority ought not to have consented to the departure of the officer, or at any rate that the duties of his office must be carried on during his absence in exactly the same manner as if he had remained. We do not say that this is a correct interpretation, or one that is intended by the Board, but it is certainly one that is liable to be made, and it is likely to deter local authorities from giving permission to officials to join the military or naval forces. The presence among the troops of men having a knowledge of sanitary matters is invaluable, whether they are medical officers of health or sanitary inspectors, and we are not going too far in suggesting that local authorities should be asked to send to the Local Government Board a return of all their sanitary officers of military age, together with a suggestion that their services as civil servants should be dispensed with, and an intimation that in the special circumstances of the country the public health activities need not be so strenuously engaged in as may be necessary in normal times. There must not be the least suspicion that any Government department is discouraging enlistment, though we fear that in some quarters there is more than suspicion, for there are rumors that in more than one Govern-

ment office there are civil servants who are chafing at the refusal of higher officials to be permitted to leave their routine work, much of which could stand over for a period, and join with others in preparing themselves for the defence of their country.—*The Medical Officer.*

THE WOUNDED IN THE BATTLES OF TO-DAY.—From numerous communications which have appeared in the *British Medical Journal* from medical correspondents at the front, we learn that the medical officers in charge of those wounded during the fighting in France and Belgium are confronted with some problems which are apparently entirely new in the experience of military surgeons. These problems arise partly from the horrible nature of the wounds produced by shrapnel, which from an editorial remark in the *British Medical Journal*, we infer that the British medical officers were hitherto unfamiliar with; at least the variety of shrapnel at present being used against them. Shrapnel was originally invented by an English general and given the name of the inventor. The editorial writer referred to says: "The wounds are of a novel character, inflicted by weapons which have not been used before in any war in which Great Britain has been engaged." From this we gather that the shrapnel being used in this war by the Germans is of a different kind and produces a different kind of wound from that which has been used before. Another new problem has to do with the nature of the infections which occur in the wound. Instead of pus organisms, of the staphylococci and streptococci varieties, which have been but little in evidence in the wounds of the French and English soldiers, the tetanus bacillus, the bacillus aerogenes capsulatus and the bacillus of malignant edema have been the organisms which have infected most of the wounds and have brought about a tremendously high degree of mortality. This is explained by the nature of the soil of the country in which the fighting has taken place. The soil of France and Belgium has been for many years cultivated to a degree unknown in almost any other country. It has been thoroughly and steadily manured for centuries and consequently teems with tetanus and other anaerobic organisms which produce the most virulent of all infections when they gain entrance to fresh wounds. The amount of tetanus and so-called gas gangrene which has appeared among the wounded soldiers has exceeded anything ever known before in the experience of either military

or civil surgeons. The use of anti-tetanic serum has been shown to be quite remarkably efficient when used early and as soon as it became realized that the danger of tetanus infection was so great, it has been used as a routine treatment of all wounds. The difficulty of getting at the wounded and of transporting them to base hospitals has been so great that many of them have lain for days where they fell and consequently their wounds have been in horrible condition before any treatment could be given them. When the medical and surgical history of this war comes to be written it will probably be shown that while the mortality from bullet wounds has been comparatively small, the number of wounds from shrapnel and other forms of explosive shells has been so enormous and it has been so impossible to give prompt and efficient treatment to those thus wounded, that the general mortality of the wounded has been greater than ever before. A missile entirely new in modern war and which suggests the days of savage and medieval fighting is the long steel dart discharged in large numbers from the flying machines. These fall with a tremendous velocity and striking a man who is standing, as must generally be the case, penetrate the whole length of the body, producing, of course, very dangerous and fatal wounds.

When we consider the sufferings of those who are being killed and wounded in this unspeakably horrible war, which represents but one phase—and perhaps not the worst phase of it all, we feel that the final verdict of public opinion against the comparatively small number of so-called "statesmen" of every country engaged, all of whom must share the responsibility for the crime, must be: "Guilty of the worst crime ever committed against Christian civilization."—*St. Paul Med. Jour.*

N.B.—So far as England and Canada are concerned, there is a considerable number of members of Parliament at the front.—*Ed.*

Dominion Medical Monthly
And Ontario Medical Journal

Vol. XLIV. TORONTO, MARCH, 1915 No. 3

Original Articles

THE MEDICAL OFFICER OF HEALTH AND THE INEBRIATE

By George Elliott, M.D., Toronto.

No more important State problem presents itself to-day than the conservation, in every direction, of the morality, the health, and the lives of the people. As a causative factor in producing immorality, ill-health, and much needless loss of life, the consumption of alcohol as a beverage plays a conspicuous part.

Who knows better than the physician the harmfulness of the abuse of alcoholic beverages? He has seen or knows all the pathological effects in the various organs of the human body. He has attended the acute and the chronic alcoholic. His is the best knowledge of its baneful influence in spreading the social diseases; his the best knowledge of the part it plays in producing insanity, tuberculosis, pneumonia, Bright's disease, etc.

He knows when it acts as a sedative, a stimulant, a food, or a poison; what it has accomplished in the treatment of disease; what dose to give; what time to give it; the kind; how long to continue its administration. As with other drugs, some physicians even are never afraid to study its effects by personal experiment.

The physician knows there are some patients to whom he would not dare suggest alcohol as a medicine; others who would take it if the doctor ordered it; others, indifferently; others, gladly; still others, as the acute alcoholic, who joyfully welcome the tailing-off process.

It would appear, therefore, that in every community there are several classes into which the people can be divided as regards the consumption of alcoholic beverages.

1. The man—or woman—who is absolutely teetotal, has been, is, and always will be a total abstainer.

2. The person who, now and then, with no fixed habit, will take an occasional glass or two.

3. The person of fixed habit, which may be a glass a day, two or three a day, or forenoon, afternoon and evening, but never getting drunk.

4. The same as (3) but occasionally going one better and becoming intoxicated at various intervals.

5. The acute alcoholic, who goes upon drinking bouts of two or three days, a week, or so—say every six months or a year; an abstainer in the intervals; the dipsomaniac, with attacks of delirium tremens.

6. The chronic alcoholic; at it nearly every day; drunk often; not often sober; or if so, only for short periods of time.

A consideration of these six classes which cover any and every community or municipality will show that, as regards the drinking and use of alcoholic beverages, they may readily and practically be grouped into two divisions, the first three, and the last three.

The first three classes never become nuisances to society and so never come under the cognizance of the law, that is as regards alcohol. They may be immoral, may become criminals, may be jailed, imprisoned, cat-o'-nine-tailed, even hanged, but never for their association in any way with the alcoholic beverages.

The last three classes are the people who cause all the trouble in connection with the alcoholic problem. That is to say, if drunkenness could be altogether eliminated from society, there would be no alcoholic problem; and there would only remain the question of how much, and how often a person could use alcoholic beverages and escape doing harm to any of the organs and tissues of the body. Let each person put the question to himself or herself: To which class do I belong?

Manifestly there is little to be said with regard to the individuals in Class One. Had they their way, all alcoholic beverages would be poured into the sea. There would be no manufacture of them, and hence no importation or exportation anywhere; no distilleries; no breweries; no saloons; no liquor shops. That would be an end of it. But alcohol *per se* can never be utterly destroyed. It is a product of nature; in the tissues and organs of every human being, whether he has ever been a consumer of alcohol or not. And no one would want to destroy alcohol altogether; for no one would wish to revert to the days before chloroform and ether. Moreover, if there were no alcoholic beverages, and

all the machinery of their production demolished, the ingenuity of man would yet remain, and that ingenuity would manifest itself in the secret and illicit production of the goods. Therefore, until something better is promulgated, the world will continue to have its alcoholic beverages. It then becomes the duty of every right-minded citizen to endeavor to settle the question by the elimination of drunkenness. After that the question can only be one of compromise.

No one is going to contend that a glass of whiskey, or beer, or wine, let us say once a month, or once in two or three months, is going to do any physical harm to any individual, though that habit is persisted in over a long life. No doctor of medicine knows that it will. He cannot say from any evidence ever produced that it will. No physician can say that amount, taken at such intervals, can produce any disease in any organ or tissue of the body. No one can claim that amount does any one any harm in any way. The man in Class Two is, then, no more liable to any disease or harm than the man in Class One. He is never a nuisance to society from his alcoholic habits. The thought then travels naturally down to Class Three; and the question may properly be here put:

What quantity of wine, beer, or whiskey can a person drink daily—and never becoming drunk—without injury to the vital organs, and consequently without shortening of life in any way? Here is the crux of the whole question: If a person can safely take one, or two, or three glasses daily—and the medical profession ought to know—and then let the public know—the question would be largely solved. Does the medical profession know this? It does not, absolutely. But they can give a proximate estimate of it. For instance, if a man in Class Three consulted a physician as to what he should drink, when he should drink, and how much, the same as he would do as regards his diet in disease, the doctor would invariably advise him not to drink at all. But if the man persisted and stated that there certainly must be some quantity a person could drink daily, weekly, or monthly, without harm to his physical economy, and without even approaching the appearance of inebriety, then what would the physician counsel? It is quite likely the answer would be: Every person is a law unto himself. He must first find out the quantity from his own personal experience. He must realize for himself when and where the acme of satisfaction comes in or arrives, and where another drink would start him down the path to drunkenness. This might be one, two, or three, or more, say in an hour's time—

considering ordinary social drinking—according to capacity. There is such a point, and every person with experience knows that point. The doctor would most likely say that man is a wise one who always stops at such point, and who does not repeat the experiment again that day, nor for three, or four, or for several days. Alcohol is not to work upon. It may and will recuperate after work, and he is a wise man who uses it with the utmost caution. The point is that, for people who want to take a drink, or who will take a drink, now and again, and who have no desire or thought of getting drunk, who abhor drunkenness in themselves as well as in others, they should regularly consult their physicians in this matter. For the Third Class, and Fourth, there would be much hope of freedom from disease due to over-indulgence in alcoholic beverages, through the medium of the physician. The steady fixed-habit drinker should beware of disease of vital organs.

It is from the ranks of Class Three and Class Four that the recruits to Class Six come. The forenoon drinker, or worse still, the before-breakfast drinker, treads on dangerous ground. No man ever went to the bad through drink unless he became a forenoon drinker. That man should be protected from himself. To form the habit of drinking in the forenoon is the first sign of pathological trouble. For many years the writer has advocated the closing of all bars and liquor shops in the forenoon, at least up to eleven o'clock. It is gratifying to see that Scotland has recently adopted a ten o'clock opening law. In the afternoon or evening, after work, there may be some excuse for a drink. That is physiological, not diseased. What business have saloons and liquor shops to be open in the forenoons? None, from the business standpoint. If they all had to depend for their revenue on the business they did up to eleven o'clock, and on such like business the balance of the day, they would soon have to shut up shop and pŭt up the shutters. What valid reason, therefore, is there for their being open? To allow the man, the first morning after the night before, to become a forenoon drinker? Surely.

In the second division, the three last classes, drunkenness is the first factor of importance. All drunkenness must be eliminated in every community. How? By quarantine, the same as for other communicable diseases—and may not drunkenness exert a habit, or communicable, effect?

Ordinarily some drunks are arrested and taken to the court. Instead of being jailed or fined, they should be placed under the jurisdiction of the medical officer of health, and by that official

quarantined in their homes, lodgings, or apartments, the same as the sick and other people are quarantined for diphtheria, smallpox, scarlet fever, etc. A placard should be placed on the door, and quarantine should last for one or two weeks.

A quarantine law would have a beneficial effect upon Classes Three, Four, and Five. For persons of Class Six, a quarantine of four to six weeks, upon their first offence, would sober up most individuals, particularly if the law was stringent in the matter of supplying liquor, or the breaking of quarantine. For those a fine or jail would act as a deterrent.

By the time a new generation had been born and reared, the educational advantage of such a quarantine plan would be appreciable.

As no plan for dealing with the liquor traffic has, as yet, received wide and general application, the laws being diversified, quarantine of the drunks offers a solution of the problem never yet advocated, and one which should commend itself not only to total abstainers, but to moderate drinkers as well. The latter class, very often a predominating class in every community, hold the key to the situation, and should at least meet the out-and-out temperance people half way. If the medical officer of health were given power also to quarantine a hotel, saloon, or liquor shop for a period of two weeks or a month, upon satisfactory proof of selling to men already drunk, it would teach bartenders and proprietors to more readily recognize the pre-alcoholic stage of drunkenness.

In the past two decades, the value of the medical officer of health to any community has advanced by leaps and bounds. Smallpox and the other communicable diseases, as well as typhoid fever and tuberculosis, have gradually come under his administrative jurisdiction. Compulsory notification of disease has been gradually required. Now the social diseases are being tentatively included. Why not the great social evil which has held the boards for many generations as first and most important? There is nothing being done to prevent insanity although alcohol is claimed to cause at least fifteen per cent. of all insane. Here is the opportunity to prevent many from going insane! In this direction lies the opportunity of preventing drunkards. The very fact that a man was going to be quarantined for being drunk and isolated from his friends and his house placarded for a period of time, would act as a strong deterring force in lessening drunkenness.

The medical officer of health defends us from bad foods, bad water, bad milk, why not from the bad alcoholic beverages? Is

there any more logical solution of the liquor problem? Its recommendation lies in its universal applicability.

An isolation hospital, or farm, is required for all drunks in every large urban community.

ARMY SURGEONS, ATTENTION!—A POSITIVE METHOD OF PREVENTING AND CURING PURULENT INFECTIONS

By Charles H. Duncan, M.D., New York City.

The following method of wound treatment is being successfully employed by many of the army surgeons of the warring nations of Europe. It is to disseminate still further the knowledge of this simple and most efficacious method of wound treatment among army surgeons that this article is written.

It is especially and particularly adapted to the treatment of non-fatal wounds of warfare; not only on account of the great simplicity of technique, and convenience it offers, but on account of its wonderful therapeutic value.

Wherever the wounded soldier may lie, there in his wound is his remedy, always at hand ready for use, the exudate—the natural remedy containing the unmodified toxin. The reaction to the unmodified toxin that comes out of a wound, is the specific curative reaction of the same toxins that remain in the wound.

This method of treatment, which the writer calls "Autotherapy" surpasses in therapeutic value anything that modern medicine or surgery has ever given us for these conditions. It is being cordially welcomed by thousands of civil surgeons in all parts of the world, who are using it successfully daily in their practice. By these it is claimed to be the best method of wound treatment known. In fact, many claim they never have had a failure attend its use, others claim that it is the only method of treatment that will cure many profoundly septic conditions.

It is fast becoming the standard method of preventing and curing infected wounds all over the world. It is no longer an experiment for it has the endorsement of leading medical societies in the United States. The technique of this method of treatment given in this article is necessarily brief, for it is proposed here to give

simply a plain, concise working formula for convenient reference in the field and base hospitals.

The reader who is interested in the principle that underlies the cures made by this autotherapeutic method of wound treatment is referred to the medical periodicals given in the bibliography at the close of this article.

The Prevention of Infection.

The dog licks and cures his wounds. The only place he ever has an infection is on the head, where from anatomical reasons he cannot lick. If pus from a wound on his head be placed in his mouth at proper intervals, these wounds will also heal quickly.

If the soldier wounded on the battlefield licks his wound regularly every two hours, for three days, there will be no more deaths from this cause, for his wound will apparently heal by first intention. If from anatomical reasons the wound is so situated he cannot suck or lick it, he may still be able to abort infection by simply chewing the blood-stained portions of the cloth that covers the wound, for five minutes, swallowing the juices. This should be done twice daily for several days till the danger of infection is past. Any foreign body should be taken from the wound and chewed in a similar manner. When the mouth of the wound is small and tends to close, it must be kept open by a drain which should be used therapeutically in a similar manner. Nothing but boiled water should be used to clean the wound. If a wet dressing is desired, use normal saline only.

The "dog catchers" of the city of New York never have purulent infection, tetanus or hydrophobia, follow an injury received from the teeth of animals, and they are bitten continuously. The reason for this is, because they cure their wounds autotherapeutically. That is, they suck and lick a bite from an animal as soon as it is received. It should be remembered that we believe that the bite from an animal is liable to result in an infection, or possibly tetanus, and any neglect to thoroughly cauterize the bite from any animal invites infection, and possibly tetanus, or hydrophobia. This absolutely dependable method of wound treatment has been verified several hundreds of times a year for many years. Leading "veterinary physicians" claim in published articles on the subject of autotherapy that they would consider it a crime not to treat infection in horses by means of "autotherapy." They save the city of New York several thousands of dollars annually, by treating horses by means of authotherapy that otherwise would have been shot.

If the patient refuses to treat himself in this manner, the surgeon should simply wash the stained portion of the bandage in an ounce or two of water in a bottle and give this to the patient to drink. If pus is in the wound when the patient is presented for treatment, he is given two drops of pure pus from his own wound, by the mouth every hour until six drops are taken. A convenient method of doing this is to place six drops of pus in an ounce of water, shake thoroughly and give one-third of this at hourly intervals, then stop all medication. In many instances, that is all that is necessary to do to cure the most stubborn chronic and refractory case of infection. The pus will often stop within twenty-four hours. At first the discharge becomes thin and bloody. Give no more as long as this condition prevails, for this is an indication that the curative reaction is continuing. If the pus should become thick again, simply repeat the process. The foregoing method of treatment is applicable to all wounds that are not directly or indirectly connected with either the alimentary tract or respiratory system. Wounds of this latter class should be treated by the following technique, as in fact may all wounds. The following method of wound treatment is universally applicable to all infected wounds:

Place ten drops of pus in an ounce of water, shake thoroughly, and allow to stand for twenty-four hours, then filter through a Pasteur-Chamberlain or a Berkefeld filter, and inject twenty minims of the bacteria-free filtrate subcutaneously. Repeat the injection only when the discharge becomes thick. This occurs often at the end of the fourth or fifth day; at times, however, but one injection is sufficient.

Auto-immunization in Respiratory Infection.

Prolonged hours in the wet trenches, and undue exposure, must necessarily cause bronchitis, coughs, colds, and even pneumonia to be a frequent occurrence among the soldiers. It is in this class of infections that "Autotherapy" is again at her queenliest, curing these acute conditions almost every time within twenty-four hours if the following technique is properly carried out:

The application of "Autotherapy" to these respiratory conditions is the acme of simplicity and can be employed on the spot wherever the patient may be, if the surgeon has only a small Berkefeld filter and a hypodermic syringe. If sufficient sputum can be obtained, simply filter it through a Berkefeld filter and inject twenty minims subcutaneously. If the patient is in a

hospital, the following technique should be closely followed: Sputum 1 dram, and distilled water 1 ounce. Mix in a two-ounce bottle, shake well and allow to stand for twenty-four hours, filter through a Berkefeld filter. Inject twenty minims of the bacteria-free filtrate into the loose cellular tissues over the biceps muscle. Give no further dose until the patient ceases to improve under the preceding dose. In chronic cases this will often be from the third to the fifth day, although the condition of the patient should always be the guide as to the time another dose is needed. In very weak cases, and in very chronic cases, proportionately less should be given. One injection will, however, usually cure an acute or sub-acute bronchitis within twenty-four hours, and pneumonia if the injection is given within twenty-four hours after the initial chill. Good results are reported by many physicians who simply boil the mixture of sputum and water for five minutes, filtering through several layers of sterile gauze, cheesecloth, or filter paper, and injecting twenty minims subcutaneously. These formulas are well within safe limits. In respiratory infections the physician should make enough of the toxin to last until the case is cured.

Bibliography.

1. "Autotherapy in the Prevention and Cure of Purulent Infection." *The Practitioner.* (London) April, 1914, by Charles H. Duncan.

2. "The Prevention and Treatment of Septic Wounds in Warfare." *Indian Medical Gazette.* November, 1914, by F. W. Summers.

3. "Autotherapy in Purulent Infections, and the Technique of its Application." *The American Practitioner.* September, 1913, by Charles H. Duncan.

4. "Autotherapy in Surgery." *The American Journal of Surgery.* October, 1913, by Charles H. Duncan.

5. "Autotherapy." *The British Veterinary Journal.* (London) October, 1912, by D. J. Mangan.

6. "A New Method of Vaccine Treatment, and Prevention of Sepsis." *Medical Record.* September 16, 1911, by Charles H. Duncan.

7. "Autotherapy." *New York Medical Journal.* December 14 and 21, 1912, by Charles H. Duncan.

8. "The Radical Treatment of Chronic Catarrhal Infections of the Respiratory Tract." *Paris Medical.* January, 1914, by Charles H. Duncan.

9. "Auto-immunization in Respiratory Infections." *Medical Record.* September 5, 1914, by Charles H. Duncan.

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If a copy of this article be placed in the hands of every soldier at the front, it will be the direct means of saving many thousands of lives and suffering untold.

MIMICKING MACK

By A. C. E.

Having tied his horse to the hitching-post near the little gate leading from the lane to the cottage, Dr. Mack McAlpin now sat just inside the door of the living room, wrapped in his ulster—and in thought. Would he be detected? Possibly John VanNorman might be later than usual returning home that evening from the workship at the upper end of the village.

He could hear Mary's mother preparing the evening meal in the kitchen after having admitted and placed the chair for him. Mary, he believed, was dressing for the tea-meeting at St. Vincent. The sleighing was fine, his horse a superb roadster—they could do the four miles in twenty minutes handily. It was 7.30 and he began to fidget. Not about getting to St. Vincent by eight, but rather about the father's appearance.

The door at his side might open any minute and the man he feared to meet enter. Could they get away before he arrived? Once down the short lane and on the highway they could defy pursuit.

But the door at his side did not open that night as he expected. Fortune was favoring him for the time being. Instead, he heard a full, strong voice in the kitchen, John VanNorman having entered his home by the rear door.

"Whose horse and cutter is that out there?"

"Mr. Herbert's," answered the wife.

"Are you sure?" he rasped out sharply.

"I ought to be. I let him in myself."

"Jack Herbert's cutter is a jumper, and that one is a new piano-body. It's not that new doctor, you are sure?"

The new doctor sank his chin further into his collar as he heard Mrs. VanNorman opening the kitchen door. The lamp on the table showed but an indifferent light in the living-room—something of a cross between a fireplace and an acetylene gas jet.

"Isn't Mary ready yet, Mr. Herbert?"

"No, not yet," raising his chin and mimicking Jack Herbert's voice, as though his vocal cords had been borrowed to vibrate for the occasion.

He saw the wife shoot a glance at the husband as though to say "I told you so." Then Dr. McAlpin clutched the sides of the chair seat as the mother marched through the living-room to the parlor door, through which she disappeared, evidently to hasten her titivating and dilatory daughter.

But Mack McAlpin waited not on her return, nor the expected appearance of the doubting father in the room. Time was pressing. It would be well to turn the horse's head for the highway gate and the good things at St. Vincent. The fair lady of Nethcrby Cottage, for that was the romantic name Mary had bestowed upon her father's domicile, would find her young Lochinvar all in readiness.

He had, indeed, taken time by the front tuft, for Mary now ran hastily out and bounded into her place between the cozy coonskins.

"That was nearly a touchdown, darling," Mack whispered, as "B-11," obeying the suggestive flap of the reins, sprang down the lane and was swerved to the right for St. Vincent.

"Oh!" as she felt an arm deliberately running round her form, "you're driving too fast, Mack."

"No time to lose, dear—hullo! I wonder where Herbert is?"

Jack Herbert had bespoken Mary for the tea-meeting. But Mary had not dared tell her father Dr. McAlpin had been promised beforehand. John VanNorman, having once said "yes" or "no," she knew, was as difficult to move as an orthodox Jew. So they had planned that Mack should be sure to be there for her first. Jack always liked to go in when the people were all assembled at any function. He could show off better, especially when he had a pretty girl with him like Mary VanNorman. And all the young men of the whole countryside would have liked to have had Mary. She knew Jack was being shabbily treated, so made no reply to Mack's interrogation, which seemed to be addressed as much to the snow, or to "B-11," who was clipping off the four miles in less than three minutes *per*, as it was to herself.

"They'll be after us as soon as he does arrive," vouchsafed the doctor, who was proving his right and title to the wings of the caduceus, though some might insinuate the sinuous part as well.

"How well you mimic Jack's voice, Mack!"

"Oh, yes!" I had two years' interne service in a throat hospital. But it's not difficult to throw your voice towards your roof, so to speak, as Herbert does—I wonder why your father favors him before me?" and he pressed a warm kiss on her not unwilling lips. The tones, Herbert's, rather startled her.

"Father was standing in the kitchen door as I ran out. Did he see you?"

"I think he saw my back, but Herbert and I are about the same size and build—and this ulster collar is deep. Possibly it is the farm and the sheep."

"Yes, he has a fine farm and beautiful Southdowns. I never could, believe me, love that voice. Please do not use it any more. There is no necessity now." She turned her fair face towards his full, dark one. He thought of the stars and blue o'erhead, though night.

"I haven't a fine farm, dear, nor beautiful Southdowns, but I have a sheepskin no one should be ashamed of, and life and hope—may I hope, darling? I love you dearly."

For answer, being not unaccustomed to driving horses, as most country girls like to be on certain occasions, Mary reached for the reins and took them in her own hands.

"We have a sheepskin at home, too—it's inside the front door—magenta."

"Quit your baaing! I'll prove you out."

They were approaching the near-end of St. Vincent. She returned the lines.

"Mary, I have the ring and the license, and the pastor is awaiting us at the manse before going to the tea-meeting. I arranged it all with him this forenoon when making a call here. Then we can go on to the tea-meeting as man and wife. His wife and maid can be witnesses."

"Father and mother will be so angry, and all the people will say we eloped."

"I shall fix all that," he replied, reading acquiescence in her answer, and directing "B-11" to the clergyman's residence.

They took the minister and his wife into the cutter—at least, Dr. McAlpin took his wife, and the minister his—a little crowded, but jolly.

The entertainment was buzzing along when Mack began to be sensible of occasional glances and nods in his direction.

"I believe," he said, turning to Mary, "I believe that old—" here he checked himself—"I believe Mrs. Preacher has let the cat out of the bag. We're in for the glad hands."

"What is he saying, Mack?" gasped Mary, her face suffusing like a Percy necktie. "Oh, the mean thing!"

"The quack! He's a fiver instead of a tenner."

Mack and Mary listened, and this is what they caught from the minister's jovial announcement:

"I have to-night married Dr. Mack McAlpin to Miss Mary VanNorman and Mr. John Herbert to Miss Maudie Snow, though the first were last, and the last first."

THE "DUM-DUM" BULLET

Since the war began there have been charges and counter charges by the Powers as to the alleged use of the so-called "dum-dum" bullet. *The Star* (Montreal) has therefore secured for the information of its readers the following article descriptive of this unrecognized projectile, written by an expert whose name is withheld for obvious reasons. The writer's conclusions will prove unexpected to the lay reader. He points out:

That probably no nation has issued a real "dum-dum" bullet to its troops in the field.

That any regulation bullet will take on, under certain circumstances, the character of the hated "dum-dum."

That any individual soldier can easily turn the regulation bullet of all but one of the warring Powers into a "dum-dum."

That the wound caused by the "dum-dum" is not nearly so cruel nor so apt to have fatal effects as that caused by shrapnel.

That the "dum-dum" is used as a "cruelty talking point" because it happens to be forbidden, and that there is far more reason to ban shrapnel by international agreement.

Incidentally, he tells the origin of the bullet's peculiar name.

What is a "dum-dum" bullet?

"Dum-dum" is the name given any bullet which is so made in the original or so tampered with that its nose will spread or "mushroom" upon striking the target of flesh aimed at. The old lead bullets without jackets, in vogue a few years ago, were really "dum-dums," every one, and any jacketed bullet with a lead core

may be turned into a "dum-dum" in a moment with a knife or bayonet.

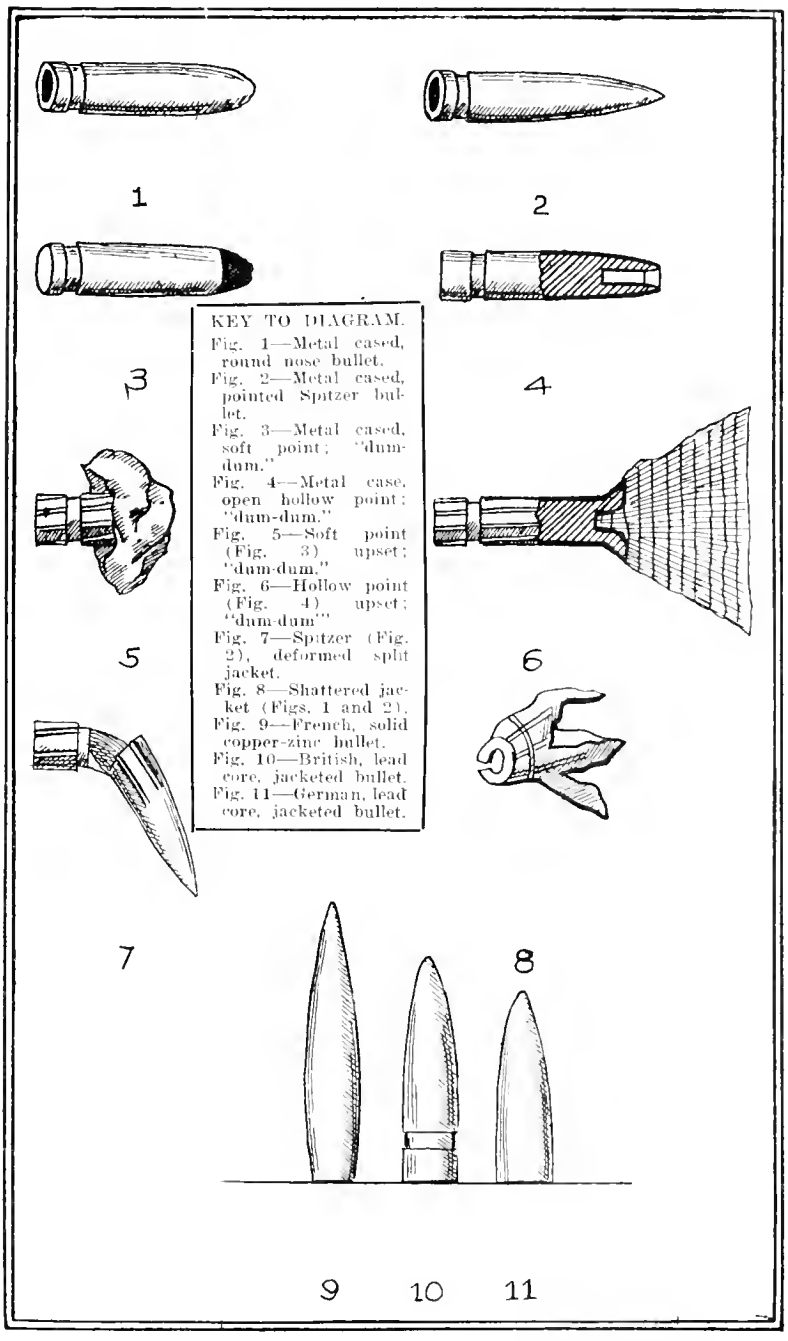
The "dum-dum" bullet was so called from the fact that an arsenal in the town of Dum-Dum, near Calcutta, first manufactured a jacketed military bullet that had either a hollow point or else a jacket split on the point, particularly so it would mushroom.

As Britain and the United States were the two nations mostly concerned with the effects of bullets on fanatics or savages, they did not sign the first Hague Agreement, in 1899, but did sign in 1907, not to manufacture, issue or use the "dum-dum" for warfare. The public must understand, however, that it is absolutely impossible to supervise the actions of every man in the trenches and if a man thinks that he wishes to tear apart some sniper who has killed several of this man's friends, you can rest assured that this man will use whatever bullet he thinks will best put this sniper out of action.

You will note that Figure 1 shows the bullet entirely covered by a cupro-nickel jacket, with the exception of the small round space on the base of the bullet, where the jacket is turned over it. On either a round nose or pointed metal jacketed military bullet this is the only point where lead is exposed.

The round nose bullet (Fig. 1) was the first issued for high power military rifles. This type of bullet was the real cause of the nickname "dum-dum," as the stiff jacket did not allow the bullet to upset or mushroom, as did the old pattern soft lead bullet, when entering a body or striking a bone. For that reason, when fighting against savages, the soldiers would cut a cross through the point of the nickel jacket, with their knife or bayonet blade, or rub off the nickel point on a rock, to allow the bullet to actually stop a savage when a rush was made. They named these hybrids after those made in that East Indian town. Before any Hague Agreement was signed this practice was resorted to by the British soldiers in Africa and by the United States soldiers in the Philippines.

All military rifle bullets have envelopes or jackets of hard metal, or else are made throughout of hard metal. The necessity of having metal jackets around a lead core was brought about by the use of smokeless powder, which gave such a high velocity and pressure against the base of the bullet that soft lead bullets simply pushed through the rifle barrel and did not take the rifling. Thus the lead bullets did not spin during their flight and did not hit where they were aimed, and also struck sideways as well as point on.



KEY TO DIAGRAM.

Fig. 1—Metal cased, round nose bullet.
Fig. 2—Metal cased, pointed Spitzer bullet.
Fig. 3—Metal cased, soft point; "dum-dum."
Fig. 4—Metal case, open hollow point; "dum-dum."
Fig. 5—Soft point (Fig. 3) upset; "dum-dum."
Fig. 6—Hollow point (Fig. 4) upset; "dum-dum"
Fig. 7—Spitzer (Fig. 2), deformed split jacket.
Fig. 8—Shattered jacket (Figs. 1 and 2).
Fig. 9—French, solid copper-zinc bullet.
Fig. 10—British, lead core, jacketed bullet.
Fig. 11—German, lead core, jacketed bullet.

Figure 1 is a full-size drawing of a metal cased, thirty calibre, round nose bullet, as used in a military rifle. Thirty calibre signifies that the diameter of the bore of the barrel is about three-tenths of an inch. Russia and the United States use a .300; Belgium and Turkey a .301; England a .303; German a .311; Austria and France a .315.

The metal jackets are generally made of steel or an alloy of copper and nickel. The cupro-nickel jacket is the most popular. Jacket material is about twice as thick as heavy writing paper and is so stiff that you can hardly bend a shattered jacket with your fingers.

The pointed bullet shown in Figure 2 is the so-called Spitzer bullet, patented by a German and first adopted by Germany as a standard military bullet. It slips through the air better than a round nose bullet, and as high velocity and flat trajectory is considered important for a military bullet this type of bullet has been adopted by nearly all the nations. It is evident that this pointed bullet cannot be "dum-dummed" as readily as could the round nose bullet, although the nickel point can be easily filed or rubbed off, thus exposing the front of the lead core.

Officers will generally caution their men not to "dum-dum" the bullet, as blunting the point reduces the range and velocity. If the point is split or ground off too far back, the pressure of the gases on the rear of the lead core at the discharge of the rifle causes the core to push through the jacket, probably splitting the jacket open, leaving the split jacket in the barrel and putting the rifle out of action or even blowing back the rifle bolt or bursting the barrel on the next discharge.

The theory of this can be seen in looking at Figure 3, which is a soft point (lead exposed on point) bullet that is manufactured for game purposes. Note that the jacket completely encases the rear end of the bullet, thus stopping any "blow through" of the lead core. This type of bullet is a "dum-dum" and is the type of bullet that the German Ambassador at Washington recently claimed as being manufactured in the United States for the British Government; which statement was flatly contradicted by the cartridge companies and thought of too little consequence by the United States authorities to warrant any investigation of same.

Figure 5 shows how this (Fig. 3) soft point bullet upsets or mushrooms on striking a bone, with a result as if a bullet three times the size was fired, helped out by pieces of splintered bone.

In Figure 4 you see the hollow point, "mushroom tip" bullet. This type of jacketed bullet was a British issue at one time and

is extremely effective in regard to stopping qualities. It is a wicked "dum-dum." The jacket of this bullet is carried to point and then turned into a hole at the point; the cavity shows exposed lead. This bullet tears on soft tissue and has rather an explosive effect.

When a bullet of the hollow point type strikes man or beast, the cavity in the point of the bullet seems to gather cloth, leather or flesh and pack it in front of the expanded bullet in the shape of the shaded section shown on the drawing. The point of entrance will then be of the diameter of the bullet, while the exit will show a "tear-out" the size of the palm of your hand.

Figure 7 shows a Spitzer bullet that, suppose we say, has struck a small bone and spit the jacket. Yet it keeps on going. When you think of that bullet leaving the muzzle of the rifle at a velocity of 2,500 feet per second and spinning completely around once in each ten inches of its flight, can you wonder why a doctor would say that a "dum-dum" bullet had been used in this case, although you know that the bullet was perfect when it left the rifle?

Imagine the "buzz-saw" action of that split jacket whirling inside one's body. At short range, when a full jacketed bullet strikes a heavy bone, it seems to fairly explode. The jacket will be shattered, as shown in Figure 8, the lead slivered and powdered and thrown away from the jacket. The slivers of lead pierce, the ragged jacket tears, and the combination results in a wound that is almost always fatal.

The actions of high velocity jacketed bullets are erratic. The writer has shot a grouse, at a distance, say, one hundred yards, with a military bullet and seen the grouse fairly explode; feet, head, wings and shattered fibre being all that was left of the bird. Experiments have been made with bodies as targets, and at short range the explosive action was noted, while at long range clean drilled holes resulted, both through flesh and bone.

The theory generally accepted is, that the bullet leaving the bore of the rifle with such a high velocity and spinning motion, takes a rotating action as does a top, for the first two or three hundred yards. After travelling that far the bullet steadies down and travels exactly point on. That wobbly motion may explain the explosive action at short range and the ease with which the bullet tips over on impact.

The three bullets, as shown by figures, numbers 9, 10 and 11, are full size drawings of the military bullets as now used by the French, British and German Governments, respectively.

The French bullet (Fig. 9) is composed of an alloy of copper and zinc (no lead core) with probably a thin plating of copper or nickel. It is the longest military bullet used by any nation and is of the type called a "boat-tail" bullet. The rear end is slightly pointed, to give the bullet less air resistance during flight.

Doctors attached to the German field hospitals report that the French bullet is very humane, causing a clean-pierced, quick-healing wound that is not generally dangerous unless a vital organ is perforated.

When you analyze the statements of some doctors that the pointed military bullet turns over in its passage through the body, then weigh the statements of the German doctors in regard to the "non-tumbling" of the extremely long and pointed French bullet, which certainly has the most reason for turning over—then, and not until then, are you in a position to realize that wounds are just as they happen to come; generally brought about by fate, located by luck and decided by the health of the body, taken together with a doctor's care.

This French bullet cannot be "dum-dummed," as it has no lead filling. It might be made flat or split pointed or even made hollow pointed, but either change would cause more trouble than it was worth, as the shattering effect of the lead filling is missing.

The muzzle velocities of these three bullets are approximately as follows: French, 2,400; British, 2,500; and German, 2,900 feet per second. Of the three the German bullet should not tip over as easily as either of the other two, but with its extreme velocity and its lead filled jacket, it ought to be the most dangerous military bullet used by any nation in the world.

In all wars it has been noted that some cruelty "talking-point," in reference to projectiles used, has been brought up for the purpose of obtaining sympathy. The "dum-dum" bullet is not legal and can be objected to, while the shrapnel shell, with its much more frightful wounds, is passed by just because its use is allowable.

If a man is not killed outright by a "dum-dum" bullet, he has a fair show for recovery, as the lead filling or bullet jacket will not generally cause blood poisoning. But when a jagged strip of copper several inches long, from the rifling band of the shrapnel, or a piece of brass pipe from the powder tube, lodges inside the body gangrene will set in in short order, especially if the man falls on the field, where he can not be immediately removed to the field hospital.

Pieces of steel or iron, with saw edges and smutted with acid gases, bronze fuse points and round lead balls that have been

smashed out of shape, make up the shower of shrapnel fragments that mostly cause fatal wounds. Wounds from a "dum-dum" bullet are like a mosquito bite as compared with the wounds made by a fragment (with exception of the lead balls) of a bursted shrapnel.

Taking all points under consideration, the publicity that has been given the "dum-dum" bullet is like trying to make a mountain out of a mole-hill.

RELIEF BELGIAN MEDICAL AND PHARMACEUTICAL PROFESSORS

(Amount not previously acknowledged.)

Manitoba Executive Committee, $200; Dr. H. B. Anderson, $50; Dr. J. B. Gullen, $25; Druggists of Kingston, per Dr. W. T. Connell, $50; Members of Kingston Medical Association, per Dr. W. T. Connell, $142; Manitoba Executive Committee, second remittance, $300; Dr. F. A. Clarkson, $10; Dr. J. S. Hart, $25; Dr. S. M. Hay, $25; Dr. H. C. Tomlin, $25; Dr. J. Ferguson, $25; Dr. R. W. Wesley, $10; Dr. C. W. Brand, $5; Dr. W. W. Ogden, $10; Dr. W. J. Wilson, $2; Dr. N. King Wilson, $1; Dr. Algernon Temple, $20; Dr. S. Cummings, $10; Dr. F. Harrison, $5; Dr. R. R. Hopkins, $2; Dr. N. H. Beemer, $25; Dr. A. D. McArthur, $2; Dr. J. S. McCullough, $5; Dr. A. Wilson, $2; Dr. F. C. Trebilcock, $5; Dr. T. J. Page, $10; Dr. J. Norman, $2; Dr. A. A. McDonald, $25; Dr. Thos. Wylie, $5; W. P. Caven, $25; Dr. Gilbert Royce, $10; Dr. Musgrave, $10; Dr. Jane Sproule, $5; Dr. C. D. Parfitt, $10; Dr. F. R. Scott, $5; Dr. R. A. Pyne, $10; Geo. Gleonna, $10; T. S. Webster, $25; Thos. Kerr, $10; T. A. J. Duff, $5; J. J. Thompson, $5; E. T. Hoidge, $10; W. E. Ogden, $2; A. Primrose, $25; Chas. P. Lusk, $10; G. B. Smith, $10; R. A. Stevenson, $5; W. F. Fawns, $5; H. M. Tovell, $5; W. C. Heggie, $5; Stewart Wright, $2; James Beatty, $5; J. W. Smuck, $2; G. and H. Carveth, $1; E. Clouse, $1; G. E. Stacey, $1; J. F. Goodchild, $5; Chas. B. Johns, $5; Dr. Angus Campbell, $5; Dr. A. Crichton, $1; Dr. D. N. Maclennan, $10; Dr. Campbell Meyers, $10; Valley Medical Association of Nova Scotia, $50—making the total to date of $1,915.

Reviews

Physiological Principles in Treatment. By W. Langdon Brown, M.A., M.D., Cantab., F.R.C.P., Assistant Physician at Bartholomew's Hospital, and Physician to the Metropolitan Hospital, etc. Third edition. Toronto: The Macmillan Company of Canada.

If the medical practitioner wishes to keep abreast of the times in many recent advances, particularly as regards the hormones and organic therapy, he will gather much valuable information from this concisely and clearly written book. The newer and modern conception of gastric physiology is well handled, and is one of the valuable chapters. Blood-pressure, autointoxication, diseased conditions in the kidneys and heart are also dealt with intelligently and succinctly. Altogether the book is such a delightful one that we heartily recommend it to our many readers.

Diagnostic and Therapeutic Technic. A Manual of Practical Procedures Employed in Diagnosis and Treatment. By Albert S. Morrow, M.D., Clinical Professor of Surgery, New York Polyclinic. Second edition, thoroughly revised. Octavo of 834 pages, with 860 illustrations. Philadelphia and London: 1915. Cloth, $5.00 net; half morocco, $6.50 net. W. B. Saunders Company, Philadelphia and London. Sole Canadian Agents, The J. F. Hartz Co., Ltd., Toronto.

No practitioner can afford to be without this most valuable book. If not all of the procedures employed in diagnosis and treatment are not given, at least the large majority, by far the best part, are given. Every practitioner will find, almost in his daily work, an urgent use for a consultant ever at hand. Here it is. It is generously illustrated both as regards diagnosis and treatment.

Dominion Medical Monthly

And Ontario Medical Journal

EDITED BY

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COMMENT FROM MONTH TO MONTH

Cancer still continues to claim many lives annually in the Province of Ontario. The deaths have gradually increased from 1,253 in 1904 to 1,806 in 1913. The number is a fraction over four times as many as typhoid fever; whilst it approaches those from tuberculosis, and almost equals the deaths from tuberculosis of the lungs—1,955.

When the mortality statistics of cancer and tuberculosis are compared, and when the actual campaign against tuberculosis in the province in the past fifteen years is remembered, it will be appreciated that it will only be a few years before cancer will be claiming as many, if not more lives, than tuberculosis in all its various forms. What is going to be done regarding cancer? How can it be neglected much longer!

Were cancer a communicable disease it would, of course, come within the active consideration of the Board of Health. But that has not yet been established. The cause of cancer is yet unknown. Until such times arrive it must still continue to claim its victims. And there is a dread of cancer almost as intense as that of tuberculosis, if not more so!

Can anything be done in the Province of Ontario to stay, and lessen, the ravages of this horrible malady? That it is curable, in many cases, when taken early, is established. Is it possible that many of these cases first fall into the hands of quacks? Most physicians know of such instances, almost annually, or at least biennially. At least the people should be educated, in some way, to consult regular physicians early in these cases.

Some system should be devised whereby each case, when death occurs, be investigated and a history secured through the medical man certifying to the cause of death. This should not be very difficult. It would form most valuable data upon which to base some active work towards the special study of cancer, its cause, distribution and prevalence throughout the province. Whose duty is it to inaugurate and undertake this work?

Special Legislation, in all our provinces, affecting the medical profession, or relating thereto, should be carefully watched by the constituted bodies of that profession. It is not to be supposed that this is solely in our own personal and selfish interests, for the medical profession has a heart for all good measures affecting the public at large. The aim in medical life is as much to prevent disease as to cure it.

Within the past two and a half decades, the period of time in which preventive medicine has been outstanding, and almost predominating, the death-rate is twenty-five per cent. lower than formerly. It is asserted that the average span of life has lengthened at least a decade. Diseases, formerly prevalent, have become almost curiosities, and many are disappearing. There is no profit in all this to a profession which would gain financially were it otherwise. The income of the average medical man has diminished. He is clearly working not so much for himself as for the community.

The profession has not benefited from the legislation the medical man has urged. He has been a consistent advocate of vaccination, inoculation against typhoid, immunization treatment for prevention from diphtheria, safe water supplies, clean, safe milk and

food, the medical supervision of school children—in fact, everything furthering sanitary science and preventive medicine. What has the other fellow been doing? Knocking! Suggesting nothing; but cutting in upon the bare moiety of practice left the educated, skilled, trained practitioner.

The men in high places, however, are generally speaking, men of keen insight and well seized of the great self-sacrifice of the profession of medicine. They realize the abundant proofs produced. They are not unmindful of the dangers of free medicine. Fortunate is it that in most cases they are guided by the past work and present conditions—by its training and experience which affords a clearer understanding.

Educational requirements cannot be too strict as regards the healing art. Influence and politics must have no part in such a question. And surely the medical profession is asking no favor for itself in asking that all forms of treatment of the sick require the very best educated, scientific, and trained minds any country can produce.

The healing art is too sacred to be trifled with for monetary gain. If the medical profession had not always recognized that altruistic principle, they would never have given freely of their services to the poor, to the hospitals, and to everything which tended to the conservation of the morality, the health and the lives of the people. That is the corner-stone upon which it has been built; its professional house is founded upon that rock.

There may be wise men yet who assert that the people should be left their superstitions, as they have their movies, etc.; that the people have always been fond of the prodigies, the fortune-tellers, the pilgrimages, and the quack-doctors. That may have done for the nineteenth and previous centuries. But in a century boasting of its education and culture, in a century damned by the most horrible war in all history, where humanity is fighting for liberty and right, a new era of right and justice to all must surely be born.

Justice and right must take the place of trickery, quackery, roguery and superstition.

Editorial Notes

ONTARIO MEDICAL ASSOCIATION

Provisional Programme.

Tuesday, May 25.—Registration.

Wednesday, May 26.—Morning: Registration. Afternoon: Business—General Session. Evening: General Session: President's Address: Address in Medicine.

Thursday, May 27.—Morning: Sectional Meetings. Afternoon: General Session: Business Meeting: Address in Surgery. Evening: General Session: Symposium on Heart.

Friday, May 28.—Morning: Sectional Meetings. Afternoon: General Session: Business Meeting.

BELGIAN MEDICAL AND PHARMACEUTICAL RELIEF

A meeting of the Canadian Central Executive Committee for the relief of the Belgian Medical and Pharmaceutical profession was held February 19th in the Academy of Medicine. Subscriptions to this most worthy object of relieving the medical men in Belgium are commencing to flow in; $2,500 has been already subscribed, and the treasurer of the fund, Dr. Wishart, 47 Grosvenor Street, has forwarded $1,500 to the Central Executive for Great Britain for distribution. It was thought best to co-operate with the English committee, of which Sir Rickman Godlee, President of the Royal College of Surgeons, is the chairman.

Sir Rickman wrote as follows to Dr. Bruce, Chairman of the Canadian Committee:

"As to the distribution of funds, it would be as difficult for Canada to ensure that proper use is made of any immediate personal relief they may send to Belgium, either in kind or money, as it is for the Mother Country. We have to do what we can in that way through the instrumentality of the International Commission for Relief in Belgium, which is chiefly in the hands of the United States, who are acting with great energy and efficiency in this direction. It would be highly gratifying to our Committee if the duty of distributing the Canadian fund was intrusted to it, but this is a matter for the Canadian Committee to decide.

"Whatever course the Canadian Committee adopts it is earnestly hoped that a considerable proportion of the collected funds will be reserved for the important purpose of reinstating the Belgian doctors and pharmacists at the termination of the war, or when Belgium can be re-occupied by its own population. When that time comes it will be well for the Canadian Committee, that of the United States, and other committees to consult and co-operate with one another in order to avoid the waste that may result from overlapping, if each body were to work independently of the others."

A STRIKING COMPARISON

In his annual report to the President of the Local Government Board, Dr. Arthur Newsholme gives some remarkable figures showing how the health of the nation has improved within the past twenty-five years. In the period preceding 1890 the Public Health Act of 1875 was gradually making itself felt on the administrative work of the country; but the changes it brought about were so numerous that its real effect could not be demonstrated with any degree of certainty. Since 1890, however, we have had more trustworthy data, and taking the returns of 1913 and making a comparison with those of the decennial period 1891-1900, the result is indeed remarkable. Thus, in 1913 the rate of infantile mortality had declined 29 per cent., the death-rate from measles 32 per cent., from scarlet fever 64 per cent., from whooping cough 62 per cent., from diphtheria and croup 55 per cent., from enteric fever 77 per cent., from all forms of tuberculosis 33 per cent., and from pulmonary tuberculosis 28 per cent., from puerperal diseases 27 per cent., from pneumonia 17 per cent., and from bronchitis 41 per cent. It is worth while to pause and read over again these figures and then endeavor to understand their real meaning. First, we have many thousands of lives preserved to the nation—a most important fact at the present grave crisis in our history. Immense suffering has been prevented, and the nation is healthier to-day because of the great reduction in deaths from the diseases enumerated. With a lessened record of zymotic disease the new race of children and young people must be stronger. That is the result of the improvement. But the record means something more. The policy of insisting on preventive measures as being the most vital and important could not be more strikingly vindicated. A clean town with well-swept streets and thoroughly good drainage; with watchful care exercised by the Medical Officer of

Health and often unpleasant duties conscientiously and faithfully performed by the Sanitary Inspector—these are the "trenches" which bar the advance of disease and because of their existence the health of the people has been improved and life itself has been lengthened. True, we may not have accomplished all that Southwood Smith, Rawlinson, and Richardson desired; yet we believe that had they lived till this day they too, would have rejoiced in the solid progress now reported. Let the croakers, so fond of shouting "degeneracy," turn to Dr. Newsholme's report and note the second paragraph. "*The death-rate from all causes has declined 25 per cent. between* 1891-1900 *and* 1913." No better praise could be given to the health workers of the present century, and in every office throughout the country these words should be inscribed as a testimony to the great work accomplished by a band of quiet, unobtrusive, industrious and earnest men and women. We thank Dr. Newsholme for his word of cheer and record of advance.—*The Sanitary Record.*

THE UNIVERSITY OF TORONTO AND THE PRESENT WAR

Though the military organizations of the Canadian Colleges were in a much more rudimentary condition than those of the British Universities, a large contribution has already been made to the Army for the present war from their graduates and undergraduates.

The following is an account of what has been done by the University of Toronto:

First Contingent.

Officers—Lt.-Col. C. H. Mitchell, B.A.Sc., member of the Board of Governors; Lt.-Col. R. D. Rudolf, Professor of Therapeutics; Lt.-Col. W. A. Scott, Associate in Surgery; Major P. Goldsmith, Demonstrator in Oto-Laryngology; Captain G. R. Philp, Demonstrator in Anatomy; Captain P. K. Menzies, Assistant in Clinical Surgery; Captain G. A. Cline, Instructor in University Schools; Captain C. E. Cole, Demonstrator in Therapeutics; Dr. B. E. Clutterbuck, Assistant in Gynecology; Dr. A. J. Mackenzie, Demonstrator in Medicine, and Mr. E. Owen, Lecturer in German.

According to our most recent information there are, besides the members of the staff, 134 graduates and 86 undergraduates, and of these 137 are officers and 83 privates. The chief elec-

trician and several of the laboratory assistants are also on service, and their places are being kept for them. Professor de Champ, and Messrs. Balbaud and Bibet of the Department of French in University College have been serving with the French Army since the beginning of the war.

Second Contingent.

Officers—Lt.-Col. Fotheringham, Associate-Professor of Clinical Medicine, is Chief Medical Officer. Other members of the staff who have been giving their time in preparing for its mobilization are: Captain J. A. Amyot, Professor of Hygiene; Lt.-Col. J. A. Roberts, Demonstrator in Clinical Surgery; Lt. G. B. Strathy, Demonstrator in Clinical Medicine; Lieut. Bruce Robertson, Assistant in Pathology.

At present our information is quite incomplete, but we have the names of 53 graduates and 63 undergraduates who have been accepted.

Action of the Senate and Faculties.

At the opening of the session the Caput, Senate and the Faculty Councils passed regulations to provide that standing should be granted to those who by reason of enlisting had been unable to take their September supplementals; also, that those who had enlisted, or who would do so, should be shown the utmost consideration at the end of the session that the University's duty to the public in maintaining professional standards will allow.

It was further decided to discontinue all teaching and laboratory work after four o'clock in the afternoon in order to enable students to take the courses of drill and instruction required by the regulations of the Officers' Training Corps.

The Officers' Training Corps.

In view of the probable establishment of an Officers' Training Corps in the University, a score of junior members of the staff began about September 15th to take drill and instruction to qualify themselves to become officers in the new corps. About October 20th authorization was received from the Militia Department. Dr. W. R. Lang, Professor of Chemistry, who with the concurrence of the Board of Governors had volunteered for active service but was appointed Instructor for this Military Division, was made Colonel of the new corps. Messrs. C. S. McVicar, A. D. Le Pan, G. N. Bramfitt, C. H. C. Wright, R. H. Hopkins, G. H. Needler,

F. C. A. Jeanneret, L. Gilchrist, M. W. Wallace, G. O. Smith, C. N. Cochrane, C. V. Massey, G. M. Smith, E. J. Kylie, G. S. Brett, E. S. Ryerson, A. F. Coventry, G. Gallie, W. F. McPhedran, R. G. Armour, D. Graham, C. R. Young, D. G. Hagarty, A. M. Thomas, A. W. McConnell, W. M. Treadgold, B. M. Morris, H. H. Madill, J. R. Cockburn, J. R. Mitchener, V. E. Henderson, H. R. Hopkins, A. R. Leggo, W. S. Wallace, H. G. Manning, all except three being members of the staff, have been appointed officers. The students enrolled enthusiastically, and though the strength authorized as yet is only 1,000, over 1,800 have been taking drill.

On Friday, January 22nd, 1,500 students with their officers were reviewed by His Royal Highness the Duke of Connaught. He addressed them in part as follows: "I wish to express to you my very great satisfaction with the splendid turnout you have given me this evening. When I looked at you and saw how you stood to attention and the admirable way in which you marched past, I saw that your work since you were formed, a very few months ago, has been performed with a will, and I can honestly say that I have never seen better results than you have shown me to-day.

"What pleases me still more is the splendid example you young gentlemen are showing to the whole of Canada. You have come forward at a moment when every man that is able to do anything to help the Empire in a time of stress is needed, and you have done so readily and in a most efficient manner.

"As an old soldier and as Governor-General of Canada, I wish to say that no parade that I have seen—and I have seen many lately—has given me more satisfaction than your parade this evening."

The Women Students.

At the same time the women students of the University have shown their determination to be of service by occupying the hours from four to six in the afternoon, when there is no instruction given in the University, with sewing and other work for the Red Cross Society.

News Items

A French-Canadian Clearing Hospital is being promoted by Laval University.

The Department of Health in Toronto gave the very best service in 1914 for the $191,025 expended.

The University of Toronto has a student body of some 4,500. Of this number 1,800 are in active training preparatory to a call to the front.

Dr. Henry H. Chown, dean of the medical department of the University of Manitoba, Winnipeg, has been visiting in Toronto and other eastern cities.

Dr. L. F. Barker, Baltimore, was the guest of honor at the recent annual banquet of the faculty and medical students of McGill University, Montreal.

The University of Toronto has offered a hospital of 1,040 beds and 450 men for service in England. It will be financed by the Canadian Militia Department.

Lieutenant-Colonel John Taylor Fotheringham, M.D., Toronto, has been appointed Chief-of-Staff of the medical services of the Second Canadian Overseas Contingent.

It is understood that practically the entire staff of the medical department of the University of Toronto, ninety odd, have volunteered for service in connection with a general hospital the University has offered Lord Kitchener. Many medical students will accompany this hospital.

Sir Frederick Treves has reported that of the first 421 cases of typhoid fever in the British army in France and Belgium, 305 cases were in men who were not inoculated. Of the thirty-five deaths, thirty-four were in men who had not been inoculated within two years. Only one death occurred among soldiers who were inoculated, and that man had been inoculated only once.

Publisher's Department

Difficult Nutrition.—When the digestive functions are impaired and alimentation becomes at all difficult, a light and easily digested diet becomes an essential if a proper level of nourishment is to be maintained. Many such foods have been introduced and offered to the physician for this purpose, but probably none have come so near the requirements as "Ovaltine" Tonic Food Beverage. In such cases as gastritis, stomach carcinoma, gastric and duodenal ulceration, colitis, sickness of pregnancy, this diet seems to be retained when others are rejected. Surgeons find it invaluable as an early diet after laparotomies. Even where anorexia is marked, "Ovaltine" appears to be acceptable. Probably its value lies in the fact that the fat constituent is well emulsified, and the carbohydrate consisting entirely of Maltose and Lactose, easily assimilable sugars.

The Delicate School Girl.—Even the most robust and generally healthy children show the deleterious results of the modern system of educational "forcing" that prevails in most of our larger cities. The child that starts the school year in excellent physical condition, after the freedom and fresh air of the summer vacation, in many instances, becomes nervous, fidgety, and more or less anemic, as the term progresses, as the combined result of mental strain and physical confinement in overheated, poorly ventilated school rooms. How much more likely is such a result in the case of the delicate, high-strung, sensitively organized, adolescent girl? It is certainly a great mistake to allow such a girl to continue under high mental pressure, at the expense of her physical health and well being, and every available means should be resorted to to conserve the vitality and prevent a nervous breakdown. Regularity of meals, plenty of sleep, out-of-door exercise without fatigue, open windows at night and plenty of nutritious food, should all be supplied. Just as soon as an anemic pallor is noticeable, it is a good plan to order Pepto-Mangan (Gude) for a week or two, or as long as necessary to bring about an improvement in the blood state, and a restoration of color to the skin and visible mucous membranes. This efficient hematinic is especially serviceable in such cases, because it does not in the least interfere with the digestion nor induce a constipated habit.

THE PHYLACOGEN TREATMENT OF PNEUMONIA.—As every physician of experience knows, the mortality in pneumonia is very high as compared to that of the average infectious disease. The dream of scientific men that a specific for pneumonia would some day materialize has not yet become a fact, and it is probable that it will not for a long time to come. In the opinion of many advanced members of the profession Pneumonia Phylacogen, while not a specific, is the nearest approach to such an agent. Certainly some remarkable results have followed the use of this product in many serious cases that have been reported in recent months—cases in some instances that had failed to respond to conventional methods of treatment. Physicians owe it to their pneumonia patients to inform themselves with respect to the merits and accomplishments of Pneumonia Phylacogen. Ample literature on the subject is available. It will be cheerfully sent to any practitioner who will address a request for it to Parke, Davis & Co., the manufacturers of Phylacogens, with laboratory at Walkerville, Ont.

SOME IMPORTANT MEMORANDA FOR THE BUSY PHYSICIAN.—In this little brochure pertaining to Fellows' Compound Syrup of Hypophosphites is set forth the technique of Tests, Reactions and Signs in recent diagnostic knowledge, which will prove of value to the physician in private practice. It may be obtained by addressing the company at 26 Christopher Street, New York.

GLYCO-THYMOLINE IN TONSILITIS.—A local remedy must fill two requirements—it must be a detergent antiseptic and produce a degree of permanency of effect.

Glyco-Thymoline as a gargle, or used as an atomizer, produces excellent results. It rapidly relieves the dry congested condition of the mucous membrane by its exosmotic action and its anodyne effect is immediate and lasting.

Glyco-Thymoline is harmless, and if any is swallowed will produce a beneficial effect by breaking up any mucous plugs that may have gained access to the stomach.

Dominion Medical Monthly

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Original Articles

SUBTENTORIAL TUMORS AND ABSCESSES*

CHAS. B. SHUTTLEWORTH, M.D., C.M., F.R.C.S., ENG.
Assistant Surgeon, Toronto General Hospital; Associate in Surgery, Toronto University.

The technical difficulties encountered by the surgeon in any attempt to expose, much less remove, tumors of the cerebellum, mainly on account of its anatomical relations, are especially great. Encompassed as it is by large venous sinuses, the peculiar plane of the tentorium cerebelli, and its confined position, far removed from the surface of the body and with a limited and difficult approach, one realizes at once that there are especial dangers met with in a radical subtentorial operation. There are distinct risks also attending manipulations upon the cerebellum in order to gain adequate exposure of tumors, due to traction, causing trauma on the medulla oblongata, which at times proves rapidly fatal. Owing to the relatively small space occupied by the cerebellum as compared with the hemispheres of the cerebrum, when the surface tension is relieved, the cerebellar tissues almost invariably protrude through the opening made in the skull and this takes place even under normal conditions. This state of affairs is all the more aggravated when a tumor is present. The situation is all the more embarrassing when the new growth is situated in the cerebello-pontine angle, for the cerebellum cannot be retracted to the same degree nor with the same ease as can the cerebral lobes.

Profuse and alarming hemorrhage may also be met with, due to emissary veins which pierce the skull near the mastoid process or in the neighborhood of the occipital protuberance,

* Read at the Surgical Section, Academy of Medicine, Dec. 16th, 1913.

sometimes necessitating the postponement of the second steps of the operation to a later date. The occipital bone on account of its varying thickness does not lend itself well to any osteoplastic flap being made and is to be discountenanced.

The indications for operation in cases of suspected tumor do not differ materially from those in other parts of the brain. Once the diagnosis has been made, if operation is to be done at all, it should be done at once and not postponed in the hope that improvement may take place under treatment, or that localization may be made with mathematical accuracy. Kocher says there should be less delay in bringing to the surgeon a lesion of the brain, whether it be a neoplasm, tubercle, gumma or abscess. There is no more excuse to-day for delaying operations in case of tumors, because the neoplasm could not be exactly located, than there would be for declining to operate upon a case of intracranial hæmorrhage because one was unable to determine positively the seat of the clot.

In order that the very best results may be obtained, the surgeon and the physician must work hand in hand in this as well as in other fields. As exploratory operation is recognized as the surest, safest and most reliable diagnostic measure in abdominal lesions, such as tumor of the stomach, it should be considered of equal value and importance in tumor of the brain. Patients with cerebral tumors make very poor subjects for surgical intervention. The operation is of itself one of considerable gravity, and the condition of the patient should be as good as to enable him to withstand its depressing effects. Therefore, no postponement of operation should be tolerated if good results are to be expected.

It is well known that cerebellar tumors are more difficult to localize than those of the cerebrum, and at times well nigh impossible. This, however, should not be an indication for delay, but rather for early exploration. When the diagnosis has been made with a reasonable degree of certainty, just so soon should operation be carried out, providing other measures have failed and the operation, *per se*, is not contra-indicated.

During the last month there have been two patients in the General Hospital who were suffering from cerebral tumors, who both died the day before that set for the operation of respiratory failure.

Operation as a palliative measure is indicated for the relief of symptoms when the tumor cannot be found or localized, or it may be inaccessible or of such a size as to make its re-

moval impracticable. This is justified in order to prolong life, to alleviate the severe and persistent headache, to stop fits or to save the sight. In general, to benefit the patient by reducing intracranial pressure, by a suitable decompression, even though it is quite impossible to remove or even locate the tumor. The headache, vertigo and vomiting, so marked a feature in cerebellar tumor, make the life of the patient pitiable, and these symptoms may be relieved for a considerable interval by relieving pressure. Of all the considerations enumerated above, for which palliative measures are indicated, there is none more urgent than optic neuritis, which steadily goes on to atrophy and blindness. This calamity may, with certainty, be averted, for a considerable time, at least, even up to a period of three years, by an efficient and early decompression operation.

Time will not permit me to enter into the details of the operative technique for the removal of subtentorial tumors, either intra- or extra-cerebellar. The mortality has of late years, owing to improved technique, been lowered from seventy per cent. to twenty-eight per cent.

I would, however, briefly draw attention to the question of the advisability of relieving intracranial pressure by the tapping of the lateral ventricles or by Quincke's lumbar puncture. Puncture of the ventricles is done for two purposes: first, as a palliative measure to relieve intracranial pressure and secondly, to relieve tension to render it possible to make a more thorough examination of deep-seated tumors, in the hope of removal at the time of operation. Experience has shown that it is a procedure of great gravity and of questionable propriety. Many cases have resulted disastrously from immediate collapse and in the majority of cases the patients have died immediately or soon afterwards.

Von Bergmann attributes the relief which follows the palliative operations for tumors of the brain more to the loss of the cerebro-spinal fluid than the removal of large sections of the skull. He, therefore, recommends lumbar puncture in cases where the pressure symptoms are very marked. According to Oppenheim, lumbar puncture is indicated in a very limited number of cases, chiefly in those where the tumor is associated with internal hydrocephalus, and especially in those where the tumor encroaches on the posterior fossa and threatens life. However, there is particular danger in this procedure and many fatal cases have been reported. The cause of death is

usually attributed to the brain stem being suddenly forced down into the foramen magnum, like a cork in a bottle, with the consequent disturbance of the vital centres in the medulla.

Lumbar puncture supplies information as to the tension of the cerebro-spinal fluid and to its bacteriological and cytological characters. But there is abundant evidence of the increase of intracranial pressure as shown by the mental condition of the patient, the headache, optic neuritis, etc. On the other hand we may get valuable indications of the probable tuberculous or syphilitic character of the brain lesion from an examination of the cerebro-spinal fluid. But cannot the same evidence be obtained by using tuberculin, the Wassermann, or other tests? Looking at the question from the broadest point of view, it would appear that lumbar puncture, especially in cases of subtentorial tumors, where the pressure is usually very great, is fraught with considerable peril.

The frequency of subtentorial tumors may be gathered from collected cases. Schüster, from an investigation of 1,000 cases, showed that cerebellar tumors are relatively more common than cerebral, the comparative size of the two regions being taken into account. Paton's tables show cerebellar and extra-cerebellar tumors together form rather more than twenty-five per cent. in 202 cases of brain tumor formation.

Gliomata, sarcomata and endotheliomata are the commonest types. Other forms are fibromata, tuberculomata, syphilomata, cysts and carcinomata.

Gliomata are generally primary and single, are ill-defined and seldom amenable to surgical operations.

Sarcomata grow from the meninges, periosteum of the cranial bones and from the sheaths of nerves and vessels. They are primary and then single or secondary and their multiple. Sarcomata are more or less encapsulated, tending in the first place to cause pressure only and then later invading surrounding regions. In the early stage of its development the tumor may be completely removed.

Endotheliomata grow from the meninges. They are hard in their early stages, definitely non-infiltrating and when accessible, removable.

Fibromata commonly originate in the cerebello-pontine angle, possessing a narrow stalk, often an atrophied nerve or vascular bundle, being very frequently attached to the eighth nerve, hence often designated acoustic tumors. They may be small or large, appearing as pink lobulated tumors growing

slowly and not invading the brain tissues. When accessible, are often readily removed.

Tuberculomata, commonly situated subtentorially, are often multiple and cannot be considered favorable tumors from a surgical standpoint, because usually accompanied by similar lesions in other parts of the body and commonly infiltrating the meninges.

Syphilomata are not so common as in the cerebrum, sometimes totally unaffected by anti-syphilitic remedies. They appear as hard, encapsulated tumors and if they can be reached are readily removed.

Cysts are of frequent occurrence, being (1) traumatic (for partially absorbed blood clot); (2) parasitic; (3) cystic degeneration of a sarcomatous, carcinomatous or gummatous mass, or (4) simple arachnoid cysts. Many of these cysts are amenable to surgical treatment.

Carcinomata are always secondary to cancer in other parts — particularly the breast. Are usually multiple and are quite unsuited to surgical procedures.

Subtentorial abscesses may be (1) multiple and generally pyæmic in origin, (2) acute traumatic abscess, usually from infected compound fractures of the skull, and (3) chronic abscess.

Chronic abscesses of the brain to which I will confine my remarks, in a large proportion of cases arise from middle ear suppuration and are about one-half as common as abscesses in the temporo-sphenoidal lobe; these abscesses are also due to the same cause.

Many of the symptoms common to cerebral abscess are intensified when the focus of suppuration is situated in the confined space below the tentorium cerebelli. Headache is exceptionally severe and usually occipital in type; optic neuritis may develop early and reach a high grade of intensity, vomiting is severe and exhausting, while other symptoms dependent upon the increased intra-cranial pressure—slowing of the pulse alterations in respiratory rhythm—are correspondingly accentuated.

The more localizing symptoms are vertigo, when standing the patient tends to fall in some particular direction, most commonly to the side affected, although opinions differ on this point and may lead to error in diagnosis. Sometimes Dana's cerebellar fits are noticed—vertigo, roaring in head, relaxation of limbs and the patient falls unconscious. This symptom is

said to be pathognomonic of an abscess (or tumor) in the cerebello-pontine angle. Cerebellar gait, disturbances of co-ordination, paresis or paralysis of the limbs of the ipso-lateral side and a conjugate deviation of the eyes to the opposite side, with nystagmus of a coarse type are also observed in well marked cases.

Treatment: Two courses are open for the operative treatment of otitic cerebellar abscesses: (1) To trephine directly over the antero-lateral aspect of the cerebellum (the usual site of the pus), and postponing the mastoid exploration to a later date (the two-stage operation), and (2) To carry out the radical mastoid operation, searching for the stalk of the abscess and draining the abscess into the now-united middle ear and antrum (the one-stage operation).

The former method (the two-stage operation), is advocated by many general surgeons, the latter is the one usually pursued by the aural surgeon.

The advantages claimed for the former method—the direct trephining method—are as follows:—

(1) The general condition of the patient is often so serious as to prohibit the more prolonged procedures essential to mastoid exploration.

(2) When an exploration is conducted through the infected middle ear, one unsuccessful attempt to find the abscess carries with it the dangers of meningeal or brain infection, which can be avoided if a separate incision is made in the healthy tissues over the lesion.

(3) The drainage through the trephine hole is much more efficient.

(4) Many general surgeons do not possess that intimate anatomical knowledge of the middle ear and its surroundings which is necessary to carry out a complicated aural operation.

Each case must be judged on its own merits. Rawling advocates the two-stage operation, evacuating the abscess and draining with a tube, when the diagnosis of cerebellar abscess is reasonably certain and then followed by the mastoid operation as soon as the patient has recovered from the first procedure. When, however, considerable doubt exists as to the situation of the abscess, or the nature of the complication in general, it is then advisable to start by exploration of the mastoid and aural regions, further measures being adopted according to the conditions found at the time of the operation.

478 Huron Street, Toronto.

THE EMERGENCY

By A. C. E.

"Business as usual" had begun in the Provincial Bank of Tottenham, as Mr. Chamberlain, the manager, stepped in precisely at ten o'clock. There was an expectant raising of heads of tellers, ledger-keepers, clerks; for the day was the first of April—and had the manager ever been known to miss an opportunity to pull off a practical joke at the expense of some one of his juniors?

With a curt nod at the cages he brisked through to his private office. Turning to close the door, his shrewd eye glimpsed the exchange of sly winks and abortive grins as the staff resettled to its duties. He might fool them by doing nothing.

Mr. Chamberlain flung his Balmacaan into the embrace of an oak chair which stood, open-armed, like a sturdy backstop awaiting the delivery of the sphere. Upon it he deposited bottle-green fedora and chamois gloves. Then he seated himself at his glass-topped desk, brushed aside the ready pile of correspondence and reached for the telephone.

"_____"

"H1046."

"_____"

"Is that you, Dr. Greene?"

"_____"

"Come at once to the Provincial Bank—the paying teller has gone insane!"

Once again did Mr. Chamberlain call for a number, and when he had replaced the ear-piece in its socket and pushed away the instrument, Dr. Greene and Dr. Robinson were on their way to the emergent call.

Drawing the pile of letters before him, he took up the first and began hurriedly glancing over its contents, chuckling to himself, and wondering how the teller would pay out this emergency. In discussing the political situation, the manager had always contended there was no emergency. The teller had always affirmed there was—that Germany was prepared for war—was a menace, in fact, to the British Empire, if not to the whole world. His argument had been that everybody should always be prepared for any and every emergency. Banks should ever be ready for a run. Mr. Chamberlain remembered in the heated argument of the pre-

vious day the teller had instanced the case of the doctors, who always went prepared to any emergent call. Would they now? The manager would put them to the proof. How would the teller meet his emergency? As though any person ever knew when an emergency would arise!

"Come in!" he called to a knock which sounded on the office door, as he laid down the first letter, and without turning from the correspondence.

"You sent for me, I believe," quietly announced the visitor, as she stepped within and began taking off her gloves, after having set a neat, brass-mounted, black, professional-looking bag upon the desk,—"accident or design?"

"Eh? I beg your pardon—who did you say you were?" and the manager sprang from his chair to his feet and swiftly sensed the tidy, self-possessed, compact woman of medium height and build, who was quietly removing a long, reddish-looking, rubber tube from the black bag on the desk.

The lady, who was none other than a woman doctor, quite recently established in the town, Dr. Caroline Courtenay, paused. This man did not act like one who had just taken strychnine, although the sudden jump from the chair might be a premonitory symptom acting as usher to others which would shortly follow.

"I did not say who I was," with much dignity, "though I am Dr. Caroline Courtenay. I got a message a few minutes ago to come to the bank at once—a man had taken strychnine. I asked the teller about it, and he sent me in here. Did you take it by accident or on purpose?" and she drew the obnoxious and nauseating instrument through her left hand. "There's no time to lose."

"Er—yes—I think—yes—I may have taken an overdose," stammered the manager, and he jerked his arms and shrugged his shoulders, at the same time catching his breath and stamping his feet. "Oh! I beg your pardon—I was afraid I might step on that thing—put it away!" pointing at one end of the snaky-looking coil on the carpet.

Dr. Caroline Courtenay sharply scrutinized her patient. Was the man crazy? And was he attempting suicide?

Suddenly loud voices, in rapid altercation, burst hotly from the outer office through the half-open door.

The manager stood still and listened, while Dr. Courtenay recognized the voices of two confreres. The incident added zest, professional zest, to commence operations at once. She could manage the manager-patient. There was no need for assistants or consultants. "Hurry, sir! sit down in that chair again before

it is too late!" and she poised the tube deftly between the thumb and forefinger of her right hand.

Forgetting for the time being that he was supposedly a poisoned man, Mr. Chamberlain, breathing something about "professional ethics," threw wide the office door and hastened to the two medical men, imminently combative.

"I tell you, Dr. Robinson," Dr. Greene was repeating for the third time, "he is my patient—I got here first," wildly gesticulating in front of the paying teller's wicket, where he had been standing for several minutes quietly quizzing that altogether innocent individual.

"I was called, too—two will be needed anyway," spluttered Dr. Robinson, his more elderly brother of the scalpel, with an oblique look at the open-eyed teller, who stood speechless at the turn affairs had taken.

"Come with me, gentlemen—come to my private office!" interpolated Mr. Chamberlain, laying a hand on the sleeve of Dr. Greene. "You are both needed." Customers were coming in, and he did not care to have any clashing of consultants.

When the manager returned to his private office with the two medical men they bowed reservedly to Dr. Courtenay, who had taken possession of one of the office chairs. Mr. Chamberlain motioned Dr. Greene and Dr. Robinson to seats on a lounge placed at the back of the office.

"Dr. Courtenay," he began, "you were called here to treat some one who had taken strychnine?"

"Yes."

"And when you asked the teller he sent you in to me?"

"That is correct."

"And I said I had probably taken an overdose?"

"Quite so."

"That was not so. I had called these two gentlemen to examine the teller, who, I am afraid, has gone insane, or is developing signs of insanity—wait a minute," and he held up his hand as Dr. Courtenay was about to reply. He touched the button under the edge of his desk. "Send the paying teller to me directly!" he ordered to the boy who responded to the call. That official appeared in the doorway. The manager fixed him with a steely eye. That gaze meant business.

"You telephoned for Dr. Courtenay to come to the bank?"

"Yes, sir," apologetically.

"Then return to your wicket, and pay Dr. Courtenay her fee." Mr. Chamberlain arose and bowed to Dr. Courtenay, who departed.

"Now, gentlemen," turning to the two medical men, "have you the papers with you to certify to that man's insanity?" he asked triumphantly. "No? I thought medical men always went prepared for every call. I certainly told you a man had gone insane in the bank."

"We can get the papers and have them filled in this afternoon," volunteered Dr. Greene, who was a young practitioner.

"Yes," returned the manager, "and in the meantime he may pay out more money on some cheques than he should; or, perhaps, shoot himself, or some one in the bank. He has a revolver on his desk all the time."

"Not so fast, Mr. Chamberlain; I, at least, am not yet convinced that your teller is insane," interjected Dr. Robinson. "I should like to observe him a little longer. I hadn't much time to study the case. Dr. Greene thought I was interfering."

"Well, do you both go out and study the case to your heart's content," and he resumed his correspondence as the two medical men withdrew, pulling to the door after them. The manager was glad to get a spell to think how he would get out of his emergency dilemma.

At the end of a half hour Mr. Chamberlain looked cautiously out into the general offices. Both medical men had vanished. He summoned the teller.

"How much did Dr. Caroline Courtenay cost you for your fool-proof emergency?" he inquired, laughingly.

"Five dollars." There was a twinkle in the teller's eye.

"How did you get rid of the other two?"

"I told them I would give them ten each of the bank's money if they would get out and leave me alone."

"You're crazy all right. I'll have to foot that bill; but no more emergency calls for me, please."

CEREBRO-SPINAL FEVER: A MEMORANDUM FROM THE LOCAL GOVERNMENT BOARD *

Occurrence of the Disease.

A memorandum of the first importance upon the incidence of cerebro-spinal fever, its clinical features, and the administrative action that should be taken against its spread, was issued on Wednesday morning by the Local Government Board to the medical officers of health and sanitary officers of this country. The memorandum has been prepared by Dr. Arthur Newsholme, medical officer of the Board, in view of the recent occurrence of the disease in various districts, and is a revision of the memorandum first issued by the Board in 1905 and re-issued in 1910. After a brief resume of the outbreaks of the disease at earlier dates, the memorandum continues:—

Incidence of the disease.—In this country seasonal incidence of the disease has not been marked, but there has been some increased prevalence of the disease in winter and still more in the spring. This has been much more marked in Continental and American experience. Amongst the civil population in this country and in such epidemics in other countries the majority of the cases have occurred in children. During 1912 there were notified in England and Wales 272 cases,[1] during 1913, 304 cases, and during 1914, 310 cases of this disease. It is possible that some of these cases were meningitis due to other micro-organisms than the meningococcus, and that some cases regarded as cerebro-spinal fever were poliomyelitis. On the other hand, it is not unlikely, in view of the difficulty of diagnosing sporadic cases, that unrecognized cases of cerebro-spinal fever may have occurred.

Clinical features of the disease.—The late Mr. Netten Radcliffe described cerebro-spinal fever as "an acute, epidemic disease, characterized by profound disturbance of the central nervous system, indicated at the onset chiefly by shivering, intense headache or vertigo, or both, and persistent vomiting; subsequently by delirium, often violent, alternating with somnolence or a state of apathy or stupor, an acutely painful condition with spasm—sometimes tetanoid—of certain groups of muscles, especially the posterior muscles of the neck, occasioning retraction of the head and an in-

* "The Lancet," February 27, 1915.

[1] The disease was made notifiable for the entire country from Sept. 1st, 1912. Prior to this it had been notified in a number of sanitary areas.

creased sensitiveness of the surface of the body. Throughout the disease there is marked depression of the vital powers, not infrequently collapse, and in its course an eruption of vesicles, petechial or purpuric spots, or mottling of the skin is apt to occur.[2] If the disease tend to recovery, the symptoms gradually subside without any critical phenomena, and convalescence is protracted: if to a fatal termination, death is almost invariably preceded by coma. After death the enveloping membranes of the brain and spinal cord are found in a morbid state, of which the most notable signs are engorgement of the blood vessels, usually excessive, and an effusion of sero-purulent matter into the meshes of the pia mater and beneath the arachnoid."[3] Local prevalence of illness distinguished by the foregoing features would, no doubt, attract attention and would, it may be presumed, lead to early recognition of its true nature. But while these features are characteristic of typically severe cerebro-spinal fever, experience shows us that it may and does appear in milder or in anomalous forms which render identification difficult, and which lead to its being mistaken for other ailments of more common occurrence in this country. Illustration of this is afforded by certain localised outbreaks of cerebro-spinal fever in the eastern counties in 1890, where this disease was generally mistaken for sunstroke or for enteric fever, or was looked upon as a new form of illness; by the prevalence of what would seem to have been cerebro-spinal fever in Northamptonshire in 1890-91, where the malady was for the most part diagnosed as pneumonia or as sore throat; and by the occurrence of cerebro-spinal fever in Irthlingborough in 1905, where many of the persons attacked were regarded as suffering from influenza. In these anomalous forms of cerebro-spinal fever, many or even most of the symptoms associated with the recognized type of the disease may be absent, while in mild cases they may be so slight or of such brief duration as to escape notice. It is necessary to be on the outlook for such cases when cerebro-spinal fever occurs in a locality or when illness not clearly referable to definable cause prevails in a particular neighborhood. Cerebro-spinal fever is apt also to escape recognition when it is of the "fulminant" variety, in which death ensues rapidly. In these instances the disease has been mistaken for typhus fever, idiopathic tetanus, malignant measles, or other diseases.

[2] In a very considerable number of instances, however, no eruption of any kind is present.

[3] To the clinical manifestations of the disease indicated in the above description may be added the presence of Kernig's sign and of tache cérébrale.

Mode of spread of the disease.—Cerebro-spinal fever has a much more restricted direct infectivity than characterizes a disease like smallpox, which attacks the majority of persons exposed to infection who are unprotected by vaccination or previous smallpox. In most outbreaks of cerebro-spinal fever only one member of the invaded family develops definite symptoms of meningeal disease, though exceptions to this statement are not uncommon. The meningococcus is found in the mucous secretion of the nasopharynx in a considerable proportion of those suffering from the disease, especially in its earlier stages, and also in some apparently healthy persons who have been in contact with cases of the disease.

The memorandum continues by pointing to the probability of carriers of infection existing who are themselves unaffected, and while admitting that modes of infection as yet unrecognized possibly exist, concludes that cerebro-spinal fever generally spreads in association with overcrowding, lack of cleanliness and ventilation, inclement weather, and perhaps excessive fatigue.

Administrative Action.

The second part of the memorandum deals with administrative action, and commences by pointing to the necessity of careful diagnosis between cerebro-spinal fever and poliomyelitis, both of which diseases are compulsorily notifiable. The advisability also is mentioned of making inquiry into the circumstances of deaths recorded as tuberculous meningitis, meningitis, or convulsions (with no further definition) when these deaths occur in districts where cerebro-spinal fever is known to be present, while medical officers of health are recommended also to invite from practitioners details as to anomalous cases of sickness which might be cerebro-spinal fever.

The memorandum then points out the necessity of employing bacteriological aids to diagnosis.

In view of the difficulty of diagnosis of early cases of the disease the Board are prepared to undertake the examination in their pathological laboratory of cerebro-spinal fluid sent to them packed in accordance with the regulations of the post office. The parcel should be addressed to the Medical Officer, Local Government Board, Whitehall, and should be accompanied by a short statement of the circumstances of the case. The hour at which the specimen was collected should be stated, and delay in transmitting the material should be avoided. The patient is also to be strictly isolated, carefully nursed, and all precautions are

to be observed as to disinfection, both during the patient's illness, and later when the sick-room is vacated.

The memorandum continues:—

Investigation of sources of infection.—The possible occurrence of anomalous cases should be investigated. Special attention should be directed to cases of sore throat, headaches, pains in back and limbs, etc., suggesting "influenza." The important share borne by healthy "carriers" as agents of infection should be borne in mind. The bacteriological examination of swabs from persons likely from their history to have acted as "carriers" should be undertaken. The method of procedure is set out in the next paragraph.

Investigation of possibilities of continued infection.—The infectivity or otherwise of contacts can be determined by taking swabs from the upper part of the nasopharynx. Swabs from the fauces are of small value. It is important to avoid contamination of the swab by the bacteria of the mouth and fauces. This has been effected by using a swab mounted on a long rod, curved at its distal end, and protected by a metal cannula. The swab should not be extruded until the end of the cannula has passed behind the uvula, and should be withdrawn into the cannula immediately after careful contact has been made with the mucous membrane of the nasopharynx. As the meningococcus does not live long in the swab it is desirable that Petri dishes containing suitable media should be obtained direct from a laboratory and inoculated directly the swab has been taken. The first Petri dish may become overgrown with extraneous organisms, and it is therefore desirable to use two dishes, the second being inoculated from the first by means of a sterile glass rod or other sterile implement. The Petri dishes should be forwarded to the laboratory without delay. Whenever practicable swabbing should be done by or under the superintendence of the bacteriologist. Inability to secure a positive result from swabbing may be caused by unskilled swabbing or by failure in the subsequent procedure of inoculation of the medium in the Petri dish or by failure to incubate promptly at the appropriate temperature. Negative results obtained with swabs sent by post for transfer to culture media at a laboratory may be due to the death during transit of any meningococci present.

Precautionary measures as to contacts.—All persons who have been in attendance on, or otherwise in close personal association with, the patient should be regarded as possible carriers of infection. The duration of the infectivity of contacts is doubtful. It will be a useful rule to regard them as possibly infective for three

weeks from the date of last association with a patient, but the partial restrictions to their intercourse, otherwise desirable, may be relaxed if swabs from the nasopharynx examined under the conditions set out in the foregoing paragraph fail, preferably on two occasions, to show the presence of the meningococcus. Contacts should be instructed and warned that they may be a source of danger, although remaining quite well themselves, and that for this reason they must abstain from intimate personal association with others. This rule should be especially followed by contacts who have catarrh. Contacts should also be advised that an open-air life diminishes the risk of infection, both of themselves and of others. Isolation of such contacts in a hospital should not be attempted. Detection of the meningococcus in the nasopharynx of a contact is valuable evidence of his potential infectivity to others, while failure to find the micro-organism does not possess an equal negative value. Nasal sprays have been recommended for contacts, a disinfecting solution such as potassium permanganate, 1 in 1,000, being used. If spraying is employed it should be carried out under medical supervision.

General preventive measures.—In the presence of cerebro-spinal fever the nearest approach to open-air life should be aimed at, especially for all contacts. In view of the known association of cerebro-spinal fever with overcrowding, insufficient ventilation, and uncleanliness, the avoidance of these conditions becomes a matter of prime importance. This is especially true where large numbers of persons are aggregated under one roof.

A covering letter to Dr. Newsholme's Memorandum, signed by the Assistant Secretary of the Local Government Board, requests that medical officers of health will forward to the Board, addressed to the medical officer, a report on each case of cerebro-spinal fever notified in their districts, and a schedule is appended to the memorandum indicating the form which the information should take.

Reviews

"*Defective Children.*" By T. H. Kelynack. The price of the volume will be $2.25 net. Sole agents for Canada: The Macmillan Company of Canada, Limited, 70 Bond Street, Toronto.

Messrs. John Bale, Sons & Danielsson, Ltd., of Oxford House, 83-91 Great Titchfield Street, London, W., are about to issue an important medico-educational work on "Defective Children." The volume is edited by Dr. T. N. Kelynack, and consists of a representative collection of studies by twenty-seven well-known medical experts, dealing with the chief forms of defectiveness in children. At a time when everyone realizes the importance of conserving the nation's children such a work should be of special service to all interested in the scientific supervision of child welfare work. The book is appropriately dedicated to Sir George Newman, M.D., Chief Medical Officer of the Board of Education.

Student's Pocket Prescriber. By David Mitchell Macdonald, M.D. Fourth edition. Price, 1s. 6d. Edinburgh: E. & S. Livingstone.

This little pocket book has been revised in accordance with the B. P., 1914. The medical student will find it an efficient guide in prescription writing.

International Clinics. Volume I. Twenty-fifth series, 1915. Philadelphia and London: J. B. Lippincott; Montreal office, 201 Unity Building.

This is a valuable volume in that it contains the annual review of the progress of medicine during the year 1914. In addition there are a large number of papers on Diagnosis and Treatment, one being by Sir William Osler. There are four papers in the section of Medicine, five in Surgery, one on Medical Economics.

"*The Curative Action of Radium.*" By SIGM. SAUBERMANN, M.D., of Vienna and Berlin. Fifty pages with thirty-five half-tone illustrations. Published by Radium, Limited, U.S.A., 25 West 45th Street, New York, N.Y.

Dr. Saubermann is one of Europe's greatest authorities on the Radium Emanation Therapy, and in this booklet he voices the results of his research work, covering a period of over eleven years. It is of great interest to all physicians desirous of using radium emanation in treating these diseases which it influences.

The thirty-five illustrations contained are in all probability the first of their kind ever shown in this country, and demonstrate clearly the effects of the rays and emanation of radium.

The booklet will be sent free to our readers on application to the publishers, by mentioning the name of the DOMINION MEDICAL MONTHLY.

The Clinics of John B. Murphy, M.D., at Mercy Hospital, Chicago. Volume IV, Number 1 (February, 1915). Octavo of 185 pages, 41 illustrations. Philadelphia and London: W. B. Saunders Company, 1915. Published Bi-Monthly. Price per year: paper, $8.00; cloth, $12.00. Sole Canadian Agents, The J. F. Hartz Co., Ltd., Toronto.

Surgeons will be particularly interested in this volume, coming as it does from one of America's widely-known and distinguished surgeons. It treats on a variety of conditions, is nicely illustrated, and contains material of great value.

Principles of Hygiene: For Students, Physicians and Health Officers. By D. H. BERGEY, M.D., First Assistant, Laboratory of Hygiene and Assistant Professor of Bacteriology, University of Pennsylvania. Fifth edition, thoroughly revised. Octavo of 531 pages, illustrated. Philadelphia and London: W. B. Saunders Company, 1915. Cloth, $3.00 net. Sole Canadian Agents, The J. F. Hartz Co., Ltd., Toronto.

The subject of public medicine is now attaining such outstanding importance that it of necessity calls for frequent issuance of works of this character to keep the medical officers of health, and

the profession generally, in touch with the latest opinions and advances in hygiene. As a text-book for medical students, this volume can be cordially recommended. This edition shows careful and up-to-date revision. The later departments, such as medical inspection of school children, industrial hygiene—an ever-increasing study in itself—naval hygiene and military hygiene, are all carefully dealt with, and afford really compact and authoritative accounts of these special branches. The other parts of the book include all which is to be expected in books of this character.

Clinical Diagnosis. A Manual of Laboratory Methods. By James Campbell Todd, M.D., Professor of Pathology, University of Colorado. Third edition, revised and enlarged. 12mo. of 585 pages, with 176 text-illustrations and 13 colored plates. Philadelphia and London: W. B. Saunders Company, 1914. Cloth, $2.50 net. Sole Canadian Agents, The J. F. Hartz Co., Ltd., Toronto.

Here is a very practical book on the laboratory methods of clinical diagnosis. In the revision, new material has been added, and each section has been carefully revised. The chapter on the use of the microscope has had added to it many practical points. There is a new chapter on Serodiagnostic Methods, including Abderhalden's test for pregnancy. Thirty-five new pictures have been included, mostly photo-micrographs.

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COMMENT FROM MONTH TO MONTH

The Canadian Medical Association has announced its annual meeting to take place in Vancouver, July 6th-9th. It is understood that the Committee of Arrangements have so far been working well towards a great success for this meeting. That a large attendance is expected from the east on account of the Panama-Pacific Exposition at San Francisco seems to be the principal foundation upon which to build this hope.

Since the date of the meeting was announced, however, there have been many changes of momentous character; indeed, so important are conditions considered to be in the medical profession at the present time that we are informed that the President of the Ontario Medical Association, Dr. Wishart, Toronto, has deemed it advisable to suggest to the President of the Canadian Medical Association, Dr. R. E. McKechnie, Vancouver, the advisability of reconsidering the holding of the meeting of the Canadian session this year at all. So many prominent members of the Association from Toronto, Montreal, Ottawa, and other eastern cities will

be across the Atlantic, that it can scarcely be expected any very large delegations will be able to go; forby, the hospitals will be so very much undermanned that that in itself will keep many from participating in the proceedings of the meeting.

Another factor of considerable significance must also be taken into account. When the Association met in Vancouver in 1904 there was a large attendance from Seattle, Portland, and other points in Washington and Oregon. The Oregon State Medical Society met immediately following the Canadian, which was an inducement for the Oregon and Washington men to run up to Vancouver and then return to their own meeting. The visitors to the Canadian Medical meeting from these two States possibly numbered some sixty to seventy. Such a delegation can scarcely be expected this year on account of the fact that the meeting of the American Medical Association which is to take place June 21st to 25th in San Francisco will prove the big attraction to medical men in the Pacific States.

It is understood also that the General Secretary as well as prominent members of the Finance Committee and the Executive Council will be absent with either McGill or Toronto Base Hospitals. This will also be detrimental to a successful meeting this year.

Last year the Canadian Public Health Association called off its meeting, as many officers and members had gone with the First Overseas Force, and it is not likely that one will be held this year.

However, the matter rests with the Vancouver members, or the Executive Council. Vancouver will be reluctant to withdraw, but under the circumstances there does seem reason to expect that Eastern Canada cannot be very well represented. If the arrangements stand, then all will wish the Vancouver meeting the usual or better, success.

Since going to press advice has been received, through Dr. Wishart, that the Canadian Medical Association has cancelled its meeting for the present year.

The Chiropractors failed utterly to secure recognition in Ontario. Next! When the proposed measure for recognition of this body and the establishment of a training school came before the Private Bills Committee of the Ontario Legislature it received very scant consideration. Whilst two or three members seemed to favor its adoption, the good sense of other members and of the Government in particular was strongly in evidence.

Ontario has all the medical schools it needs. That apparently is the position of the Government. Its policy is opposed to the establishment of any other medical, or pseudo-medical, schools or colleges. If any one, or even the entire population, want to become doctors of medicine, the schools are there for them. If they took a straight medical course they would not wish to practise any particular cult very long.

Did any one suggest to the chiropractors and the osteopaths *et al* the advisability of offering a corps of manipulators and rubbers for active service abroad?

McGILL UNIVERSITY

The officers of No. 3 McGill General Hospital are: Lieutenant-Colonel Herbert Stanley Birkett, officer commanding; Lieutenant-Colonel H. B. Yates, Drs. John M. Elder, John McCrae, J. George Adami, W. H. P. Hill, Edward W. Archibald, A. Howard Pirie, L. J. Rhea, William G. Turner, Campbell P. Howard, Herbert M. Little, W. B. Howell, Colin K. Russel, W. Hutchinson, J. C. Meakins, Wm. W. Francis, J. A. MacMillan, R. H. M. Malone, L. H. McKim, W. T. Ewing, J. C. Wickham, H. C. Dickson, H. C. Burgess, L. L. Reford, R. St. J McDonald, Donald Hingston, J. G. Browne, David Law, quartermaster, and A. Stevenson, dentist. Supernumerary, Revere Osler. There are still a few additional appointments under consideration.

Mr. Revere Osler is a son of Sir William Osler.

Editorial Notes

ONTARIO MEDICAL ASSOCIATION; HEALTH OFFICERS OF ONTARIO

General Information.

The fact that the above two Associations will hold joint meetings, that business of far-reaching effect to the medical profession of this province will be introduced and discussed, and, finally, that an excellent programme has been prepared, should make the approaching meeting one of the very best ever held in the province.

As this is the first time that the Ontario Medical Association has met east of Toronto, and the first time in one of the smaller cities, every effort is being put forth by the local committee that nothing be lacking to ensure the success of the meeting.

Peterborough is situated seventy-five miles east of Toronto on the main line of the C.P.R., and is one of the most rapidly growing cities in the province, with a population of nearly 25,000.

Thus its accessibility from east to west by rail or motor car, its miles of beautifully shaded streets, numerous parks, well kept lawns and good hotel accommodation render it an ideal place for convention purposes.

Good roads and attractive country side make motoring a pleasure, and visitors coming by automobile will find ample accommodation for their cars.

The meetings will be held in a group of buildings surrounding Central Park, which is situated in the centre of the city. These are: The Armories, one of the most commodious in the province, the Assembly Hall of the Collegiate Institute, seating some 600; the Assembly Hall of the New Public Library, seating 250; the Assembly Hall of the Y.M.C.A., all within stone's throw of one another.

Hotels. Several hotels, two of them being among the largest of the smaller cities, will be at the service of our visitors. The committee also have a list of excellent boarding-houses, where good rooms may be secured.

Railways. Peterborough is situated on the main line of the C.P.R., and is also the centre of the Midland System of the G.T.R., offering a direct service on the main line of this road via Port Hope, or by Orillia and Lindsay, for those coming from the north.

The Medical Officers of Health of the province will meet on Tuesday and Wednesday. On Tuesday evening an address of interest to all medical men will be given. The programme for this meeting will be issued in the regular way by the Secretary of the Provincial Board of Health.

PROVISIONAL PROGRAMME.

Tuesday, May 25—Registration.

Wednesday, May 26—Morning: Registration. Afternoon: Business—General Session. Evening: General Session—President's Address—Address in Medicine.

Thursday, May 27—Morning: Sectional Meetings. Afternoon: General Session—Business Meeting—Address in Surgery. Evening: General Session—Symposium on Heart.

Friday, May 28—Morning: Sectional Meetings. Afternoon: General Session—Business Meeting.

On afternoon of Wednesday and Thursday, entertainment of visitors by local Associations.

Contributions Promised for the Ontario Medical Association Meeting.

General Sessions.—

I. Address in Medicine, by E. C. Rosenow, Chicago—"Variations in Streptococci and their Elective Localizations in Man and Animals."

II. Symposium on Heart:
1. "Recent Physiological Findings in Heart Disease." T. G. Brodie.
2. "Syphilis of the Heart and Aorta." A. McPhedran.
3. "Auricular Fibrillation." A. R. Gordon.
4. "Treatment of a Fever Heart." H. B. Anderson.

III. Address by Adam H. Wright, Toronto—"Medical Education, with reference to the Specialties and Fee-Splitting."

Sectional Meetings.—

I. Section in Medicine:
1. "The Relation of the Mental Hospital to the General Practitioner's Work." Harvey Clare, Toronto.
2. "Pyloric Stenosis—Diagnosis and Treatment." Alan Brown, Toronto.
3. "The Relation of School Children to the Tuberculosis Campaign." J. H. Holbrook, Hamilton.
4. "Serum Therapy." W. Goldie, Toronto.

5. "The Use of Radium and Trichloracetic Acid in Dermatology." W. H. B. Aikins, Toronto.
6. "Observations on Blood Pressure." Dr. Emmerson, Goderich.
7. "Exophthalmic Goitre." Dr. D. Smith, Stratford.
8. "Clinical Manifestations of Cerebro-Spinal Syphilis." T. G. Phillips, Cleveland, O.

Papers have also been promised by Drs. Lyman, Ottawa, W. L. Bray, Raybrook Sanitarium, and J. W. Campbell, Kingston.

II. Section in Surgery:

1. "Some Observations on the Direct Transfusion of Blood." A. Primrose, Toronto.
2. "Tendon Fixation in Infantile Paralysis." W. E. Gallie, Toronto.
3. "Local and Spinal Anesthesia." J. R. Parry, Hamilton.
4. "The Saccular Theory of Hernia." Dr. Etherington, Kingston.
5. "Simple Goitre and its Treatment." F. N. G. Starr, Toronto.
6. "The Treatment of Pott's Fracture." George Wilson, Toronto.
7. "Renal Tuberculosis its Diagnosis and Treatment." Robin Pearse, Toronto.
8. "The Treatment of Arthritis." Dr. Seaborn, London.
9. "The Principle of the Surgical Treatment of Exophthalmic Goitre." W. J. McDonald, St. Catharines.
10. "Empyema." W. A. Brown, Chesterville.
11. "Surgical Aspects of Neurasthenia." Dr. Fredericks, Peterborough.

III. Section in Obstetrics and Gynecology:

1. "Scopolamine-Morphine Narcosis in Obstetrics." J. C. Gallie, Toronto.
2. "Serious Vomiting in Early Pregnancy." K. McIlwraith.

Papers have been promised by Drs. E. K. Cullen, Detroit, J. R. Goodall, Montreal, and Geo. S. Cameron, Peterborough.

IV. Section in Eye, Ear, Nose and Throat:

1. "The Treatment of Tuberculosis of the Larynx." Dr. Morton, Hamilton.
2. "The Use of the Electro-Magnet in Ophthalmic Practice." R. A. Reeve, Toronto.
3. "The Use of the Broncho-Tracheoscope and Oesophagoscope in Treatment." George Biggs, Toronto.

4. "Case Reports." F. C. Trebilcock, Toronto.
5. "Ocular Manifestations of Disseminated Sclerosis, with Case Report." Colin Campbell, Toronto.
6. "Demonstration of Accessory Sinuses Diseases." Angus Campbell, Toronto.

RELIEF BELGIAN MEDICAL AND PHARMACEUTICAL PROFESSIONS

Amounts not previously acknowledged:—Dr. Fred Montizambert, $25; Dr. A. D. McKelvey, $10; Dr. Douglas Storms, $20; Dr. W. B. Thistle, $10; Dr. F. L. M. Grassett, $25; Dr. King and Dr. Green, $10; Dr. A. H. Perfect, $25; Dr. Fred Winnett, $5; Dr. W. J. Clark, $5; Dr. W. E. Ferguson, $5; Dr. Robin Pearse, $5; Dr. McKibbon, $5; Dr. Bryans, $5; Hamilton Exec. Comm., $320; Dr. W. H. Lowry, $5; Dr. J. S. Freeborn, $10; Dr. C. M. Foster, $5; Dr. H. L. Anderson, $2; Dr. W. J. Henderson, 50c.; Dr. J. H. Cameron, $10; Dr. S. Johnston, $10; Dr. R. E. Gaby, $5; Dr. A. Taylor, $1; Dr. J. E. Elliott, $5; Dr. J. H. Peters, $5; Dr. H. A. Griffin, $5; Dr. P. P. Park, $5; Dr. Arthur Wright, $5; Dr. Bingham, $25; Dr. Shuttleworth, $10; Dr. Geo. Young, $10; Dr. Warner Jones, $5; Dr. P. MacNaughton, $10; Dr. J. Webster, $10; Dr. A. C. McClenahan, $4; Dr. W. M. McKenzie, $5; Dr. W. M. English, $10; Dr. Geoffrey Boyd, $10; Dr. W. L. Bond, $5; Dr. J. McAlpine, $5; Dr. J. McCulloch, $5; Dr. W. T. Rich, $5; Dr. W. H. Clarke, $5; Dr. George Boyer, $5; Dr. Colin Campbell, $5; Dr. B. A. Campbell, $3; Dr. Alex. Taylor, $5; Dr. N. Woods, $5; Dr. R. C. Cooper, $10; Dr. E. T. McCrae, $5; Dr. A. T. Emerson, $10; Dr. W. Gunn, $10; Dr. J. W. Shaw, $5; E. Weir, $5; Dr. Chas. Hair, $10; Dr. A. H. Harrington, $10; Dr. John L. Davison, $50; Dr. J. R. McEwen, $5; Medicine Hat Med. Soc., $50; Dr. Browning, $5; Dr. F. J. Burrows, $5; Dr. G. M. Aylesworth, $5; Dr. Wm. Faul, $5; Dr. Donald McKay, $5; Dr. J. Robin Arthur, $5; Dr. H. C. Seadding, $25; Manitoba Exec. Comm. (3rd remittance), $200; Dr. F. C. Redmond, $49; Dr. Thompson, $3.50; Dr. Graham Chambers, $15; Dr. Andrew Gordon, $10; Dr. J. A. Oille, $5; Dr. Yellowlees, $5; Dr. Hoig, $10; Dr. T. W. McKay, $5; Mr. Jas. Moore, $5; Dr. T. A. Rundle, $5; Dr. R. Young, $1; Dr. R. W. Bell, $5; Dr. Wm. McCulloch, $2; Sudbury Exec. Comm., $35; Dr. A. E. Wickens, $5; Dr. A. E. Ardagh, $5; Dr. A. R. Harvie, $5; Dr. W. G. Gilchrist, $5; Dr. W. C. George,

$5; Dr. J. N. Harvie, $5; Dr. J. A. Hocking, $5; Dr. Jas. Moore, $10; Dr. John Livingston, $2; Dr. H. D. Livingstone, $2; Dr. W. E. Dingman, $5; Dr. A. H. Nicol, $5; Dr. John Philp, $5; Dr. Jas. Stewart, $1; Dr. Oliver Mabee, $5; Dr. John Malloch, $10; Dr. A. S. Moorhead, $5; Dr. Miller, $10; Dr. W. C. Ryckman, $5; Dr. F. Woodhall, $10; Miss Madeline Bell, $5; Dr. Hess, $5; Dr. W. Stevenson, $5; Prof. McPhedran, $10; Dr. Calder, $2; Dr. Chas. Smith, $2; Dr. Thos. Bradley, $2; Dr. Robt. McDonald, $2; Dr. W. J. Hicks, $2; Dr. M. McDonald, $2; Dr. Leslie Aiken, $2; Dr. P. McG. Brown, $2; Dr. C. L. Taylor, $50; Dr. J. James, $2; John Kidd, $2; Dr. E. M. Copeland, instruments; Dr. Wm. Reid, instruments; Dr. John Dunfield, instruments; Dr. Eccles, instruments; Dr. F. Mulligan, absorbent cotton; Mrs. and Miss Adam Webb, instruments; Dr. Adam Wright, instruments, etc.; Dr. Donald Meyers, instruments; Dr. R. W. Buckle, $2; Dr. W. Marrigan, $5; Dr. H. Kolyman, $1. Academy of Medicine, Toronto, Special Committee on Hospital Supplies; Convener, Dr. N. A. Powell, instruments.

In October last the Societe Medicale de Montreal formed a committee to assist the French and Belgian physicians, and this committee has already collected the sum of $2,600. This may fairly be added to the amount above acknowledged, so that the total subscriptions from the medical profession of Canada to date amounts to $5,974.25.

CANADIAN DOCTORS FOR SERBIA

Canada has not remained unmoved by the strong appeal Serbia has sent, asking for doctors to help the Serbian wounded. It will be remembered Sir Lomer Gouin, Premier of Quebec, some time ago received a letter from the Serbian Royal Legation in London, asking the names of all Canadian doctors who would volunteer. Following is a complete list of all physicians who have offered their services for Serbia, so far:—

Albert Paling, Winnipeg; J. M. Casserly, St. Thomas, Ont.; W. J. McAlister, Calgary; A. W. M. Leclair, Letellier, Man.; O. S. Waugh, Winnipeg; D. C. Hart, Kipling, Sask.; Arthur Macaan, Birtle, Man.; R. L. Hutton, Rosthern, Sask.; J. Hetherington, Carievale, Sask.; Thomas H. Smith, North Sydney, N.S.; James Peake, Winnipeg; W. A. Dymond, Winnipeg; Alex. Osmanly, Toronto; W. P. Mackasee, Springhill, N.S.; O. A. Cameron, Stratford, Ont.; A. H. Bowen, London, Ont.; D. E.

Scott, London, Ont.; J. V. Brandon, Winnipeg; L. Zealand, Winnipeg; J. Baxter, Chatham, N.B.; W. B. McVey, St. John, N.B.; G. Degrys, Abenakis Springs; Alfred Whitmore, Cabri, Sask.; V. Bourgeault, Marcelin, Sask.; P. E. Lavoie, Marcelin, Sask.; C. M. Keiller, London, Ont.; G. E. Duncan, Vernon, B.C.; M. F. Lucas, Dryden, Ont.; J. Murray, Winnipeg; P. A. Guay, South Shipshaw, near Chicoutimi, Que.; E. E. Rohrabough, Sanford, Man.; B. A. Hopkins, Blaine Lake, Sask.; J. B. MacKay, Kitscoty, Alta.

UNIVERSITY OF TORONTO No. 4 GENERAL HOSPITAL

The following is the provisional list of doctors and nurses for No. 4 General Hospital, which is being furnished by the University of Toronto to the War Office. The list has been sent to Ottawa for approval:—

Administrative Staff—Lieut.-Col. J. A. Roberts, F.R.C.S., commandant; Major W. B. Hendry, second in command; Capt. M. J. L. Yellowlees.

Surgical Staff—Drs. A. Primrose, F. M. G. Starr, W. McKeown, J. Malloch, E. F. Ryerson, G. E. Wilson, F.R.C.S.; R. Gaby, F. W. Watts, J. G. Gallie, H. Wookey. In addition to these Drs. F. W. Marlow and B. T. Watson may be added, although they have not yet announced their decisions.

Medical Staff—Drs. A. R. Gordon, Graham Chambers, D. McGillivray, H. C. Parsons, D. King Smith, C. F. McVicar, G. F. Boyer, F. R. D. Hewitt, R. G. Armour, J. H. McPhedran.

Nose and Throat—Dr. Gilbert Royce.

Eye—Dr. W. E. Lowry.

Genito-urinary—Dr. Robert Pearse.

Sanitation—Capt. J. A. Amyot.

Laboratory Staff—Drs. Duncan Graham, N. C. Sharpe, A. A. Fletcher, C. J. Imrie.

Dental Surgeon—Dr. George Dow.

Two or three other appointments or substitutions may yet be made.

News Items

Montreal is to erect a new hospital for the tuberculous.

The death is announced of Dr. J. R. Clouston, Sherbrooke, Quebec.

Notre Dame Hospital, Montreal, treated 2,474 patients during 1914.

Dr. F. F. Westbrook, President of the British Columbia University, has become attached to the Canadian Militia.

Dr. Remi Hebert, superintendent of St. Paul's Hospital, Montreal, has tendered his resignation, after a service of seven years.

Colonel G. Stirling Ryerson, M.D., Toronto, President of the Canadian Red Cross Society, has sailed for France and England on a tour of inspection of different hospitals. He will return in June.

Drs. Victoria Reid, Toronto; T. H. Farrell, Utica, N.Y.; E. C. Watson, Detroit, have been elected to represent the graduates in medicine on the Council of Queen's University, Kingston, to serve for six years.

Drs. Alexander McPhedran, Chas. J. Hastings and Graham Chambers attend the annual meeting of the New York State Medical Society in Buffalo the last of the month. Dr. Hastings will deliver an address on Public Health, whilst Drs. McPhedran and Chambers have been invited to read papers.

Dr. William Britton died recently in Toronto. For many years he was one of the best-known physicians in the city, though latterly, for the benefit of his health, he had taken up residence in Prince Albert, Sask. He was a past-president of the Ontario Medical Association, and the Ontario Medical Council. Being a very conscientious and straightforward man, he was held in the highest esteem by his fellow practitioners and citizens.

Publisher's Department

THE RECOVERY FROM LA GRIPPE.—Since the first appearance upon our shores of that unwelcome infectious disease known as La Grippe, the medical journals have been filled with articles advocating different methods of treating the attack itself and its various complications. But little attention, however, has been paid to the important question of how to best treat the convalescent subject. Among all of the acute infections there is probably none that is as likely to leave the patient quite as thoroughly devitalized and generally prostrated as does a sharp attack of La Grippe. For some reason the degree of prostration from grippal infection appears to be entirely out of proportion to the severity of the attack itself. This peculiarity renders it advisable and usually necessary to strengthen and support the general vitality of the patient during the period of convalescence. Complete rest, nourishing food, plenty of fresh air and stimulation according to indications are, of course, distinctly important measures. At the same time tonic and hematinic medication should not be neglected. Probably the most generally acceptable and efficient general tonic and hemic reconstituent for such patients is Pepto-Mangan (Gude), a bland, non-irritant and promptly absorbable combination of the organic peptonates of iron and manganese. This efficient blood-builder and reconstructive does not disturb digestion nor induce constipation, and is readily taken by patients of all ages.

THE TREATMENT OF INACCESSIBLE HEMORRHAGE.—Every physician feels the need occasionally of a reliable agent in persistent hemorrhage that is inaccessible to the ordinary modes of treatment. In Coagulose we have a product that meets this want — meets it better, it is believed, than any agent hitherto employed for the control of hemorrhage due to defective coagulation of the blood. Coagulose is prepared in the biological laboratories of Parke, Davis & Co., from normal horse serum. It is a sterile, anhydrous powder, obtained by precipitation. It contains the fibrine ferment necessary for clotting the blood and is soluble in cold water. It is administered hypodermically (subcutaneously).

Coagulose is indicated in all cases of hemorrhage due to defective clotting of the blood, as in purpura, hemorrhage of the

new-born, nasal hemorrhage, hemorrhage from gastric or duodenal ulcer, pulmonary hemorrhage, hemorrhage during and after prostatectomy, hemorrhage from the kidney pelvis, hemorrhage from the bladder, uterine hemorrhage, and hemorrhage after turbinectomies and tonsillectomies. It is also useful as a local styptic to bleeding surfaces. For this purpose the powder may be applied on a tampon or on sterile gauze or cotton. Coagulose is supplied in 15-Cc. glass bulbs, each containing 0.65 gramme of the powder, equivalent to ten cubic centimetres of blood serum. A solution is made by the addition of six to eight cubic centimetres of sterile water.

Physicians are advised to write Messrs. Parke, Davis & Co., Walkerville, Ont., for their brochure on Coagulose, which contains the original article of Drs. Clowes and Busch, of Buffalo, who perfected the product, together with other valuable scientific research matter pertaining to the serum treatment of hemorrhages and blood dyscrasiae.

Anemia, which results from impairment of the blood-forming processes, has recently been most successfully treated by the use of blood, which seems to have a direct stimulating effect on the blood-forming organs.

This function is admirably supplied by Bovinine, which consists largely of beef blood, the biological properties of which have not been altered by heat.

In the form of Bovinine, therefore, blood is readily available for therapeutic purposes in the treatment of anemia.

Faulty Elimination.—This condition which in the main consists of the inability of the emunctories to carry off the normal wastes of the body (the urates, oxalates and chlorates), their retention and accumulation within the body giving rise to a wide variety of toxic symptoms, constitutes a great field for the application of Burnham's Soluble Iodine. It should be remembered, however, that every case is a law unto itself, and not only the degree of toxic retention, but the symptoms arising therefrom are open to wide variation. Treatment must be adjusted, therefore, to the requirements of each individual case. An excellent course is to begin with a moderate dose and gradually increase until the

full effect desired is produced, regardless of the size of the dose. The efficiency of Burnham's Soluble Iodine will be evidenced by the relief afforded the kidneys and the consequent increase of solids in the urine. It is a well-known fact that the principal harm in these cases of faulty elimination comes from the damming back of the toxic wastes in the kidneys. The result is the irritation to be expected with still further increase in the tendencies to retention. Unlike the potassium or sodium salts of iodine, Burnham's Soluble Iodine has no detrimental effect upon the kidneys. To the contrary, its whole action is beneficial and by prompting renal elimination, the local irritation is promptly decreased. Another advantage is its stimulating effect on skin elimination, an action that further relieves the irritation of the kidneys. Ten minims in water three or four times a day gradually increased a minim each day up to twenty minims three or four times each day are usually effective.

Wasting Diseases.—In selecting the best means of reinforcing the diet in wasting diseases, convalescence, neurasthenia, where feeding to the limit of digestive power is essential, three factors have to be considered:—

High caloric value.
Ease of digestion.
Certainty of complete assimilation.

The makers of "Ovaltine" Tonic Food claim rapid assimilation for their food, the claim being based on experiments carried out by an eminent physiologist. A cup of "Ovaltine" made with water only and no added sugar we find gives a caloric value of 70, while with this concentration of food value, even in cases where the digestive functions are impaired, this diet gives rise to none of the usual symptoms of either atonic or intestinal dyspepsia.

Dominion Medical Monthly
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Original Articles

RENAL CALCULI IN WOMEN *

By Arthur C. Hendrick, M.A., M.B., F.R.C.S. (Edin.).
Assistant Gynecologist, Toronto General Hospital, Toronto.

Stone in the kidney is a condition of mid-adult life, operations for renal calculi being rare before the age of ten or after sixty years, the average in 38 cases in the General Hospital, Toronto, being 39.4 years.

Women are slightly less liable than men—one to two—in this hospital. Renal calculi belong more especially to the age of stress and strain, often, however, with symptoms dating back to adolescence.

Either kidney may be affected. In 38 cases in the General Hospital 20 cases were of the right kidney, 16 of the left kidney, and 2 cases were bi-lateral. Though at first uni-lateral, sooner or later both kidneys are affected—50 per cent. in post-mortem returns being bi-lateral. At first, then, stone is uni-lateral, but later becomes bi-lateral.

Definition of a renal calculus: A renal calculus is an agglomeration (fusion) of crystals, held together by a cement substance, and not crystallizations of certain inorganic salts. Hence, one must trace the origin of the crystals in the urine, and also the origin of the cement substance. Let us consider the origin of the cement substance first.

The cement substance is an "irreversible colloid"—that is, one which does not re-dissolve when placed in a non-saturated solution. Hence the great insolubility of renal calculi.

This "irreversible colloid" is probably fibrinogen or fibrin, according to Schade, and, therefore, an inflammatory reaction is a necessary precursor of a calculus. This is not hard to believe,

* Read before the Academy of Medicine, Toronto, March, 1915.

when one realizes that a single large oxalate crystal, for example, may, in passing down from the kidney, cause all the typical signs of renal colic with hematuria.

The source of the crystalloids of the urine.—These crystalloids are:

I. Uric Acid and Urates.
II. Oxalates.
III. Phosphates.

The urine is essentially a solution of salts, its chemical and physical properties being those of a complex mixture. It has been shown by Nerst that two salts having the same "ion"—or less accurately the same base or acid in common—may mutually each decrease the other's solubility, whereas those salts which contain no base or acid in common may mutually increase each other's solubility.

I. The Source of the Uric Acid and Urates.

Uric acid, of which about .8 grams are excreted in twenty-four hours, does not exist as such in normal, freshly voided urine, hence one must explain the nature of the original solution and the cause of the subsequent separation.

Uric acid probably is excreted by the convoluted renal tubules as the bi-urate or acid urate MHU the most stable of the compounds of uric acid and probably the most soluble.

The urinary secretion of birds is solid and in the form of the quadri-urates, which the late Sir William Roberts considered as the only physiological type of uric acid salt, whether in the blood or in the urine, but most recent chemical physiologists disagree with this statement. Again, in the new-born infant certain uratic concretions are found in the kidney tubules which approximate to the quadri-urates, but these are explained by the fact that the liquid excretion is not yet fully established, whilst in the human adult, since the mechanism of excretion has become more perfectly suited to the elimination of liquid urine, the uric acid will therefore tend to assume the more soluble form of the bi-urate.

Uric acid, then, is probably excreted by the convoluted renal tubules as the acid salt, the bi-urate. In the presence of acid urine this bi-urate salt is precipitated as the quadri-urate.

$$2MHU + MH_2PO_4 = MHU, H_2U + M_2HPO_4.$$

But in the aqueous solution the quadri-urates are very unstable and decompose into uric acid and the bi-urates.

$$MHU, H_2U + AQ. = H_2U + MHU.$$

It has been observed, however, that the neutral salines in the urine and its pigments inhibit this decomposition.

Since the bi-urate is changed to the quadri-urate by the action of the acid urine, there is no more important fact to be remembered in the treatment of gravel and renal calculi than that uric acid cannot be deposited from alkaline urine, and that it cannot be deposited even prematurely in the renal passages even in urine that is neutral or feebly acid.

Hence uric acid gravel or calculi may be due to the following causes:

(1) Excessive acidity of the urine.
(2) Excessive concentration of the urine.
(3) Deficiency in neutral salines.

(1) *Excessive Acidity of the Urine.*

The diet is important. Meat, since it increases the excretion of the acid sodium phosphate, the normal cause of the acidity of the urine, should be avoided and vegetables and fruits substituted, since their acids are excreted as the carbonates in the urine and therefore reduce its acidity. Alkalies may also be given, e.g.; Potassium citrate is one of the most useful; also plenty of fluids, water, Vichy water, milk, buttermilk.

(2) *Excessive Concentration of the Urine.*

(*a*) Avoid too long intervals between food, since fasting increases both the acidity of the urine and its concentration. Since sleep is the equivalent of fasting, the measures of relief should be given towards the end of the day, e.g., at bedtime.

(*b*) Free evacuation of the bowels is important, for the following reasons: The tissue purins (C_5N_4) are probably synthetized from the proteins and carbohydrates of the food, and by oxidation of these purins, hypo-xanthin, xanthin, uric acid and urea are formed, in successive stages, the final oxidation of uric acid to urea taking place in the liver. If this last step fails uric acid may be in excess. Also, it is possible that there are certain intracellular ferments in the liver which cause destruction of the uric acid, i.e., uricolysis. Therefore, deficient action of the liver may leave the uric acid unchanged to urea.

(3) *Deficiency in Neutral Salines in the Urine.*

Since it has been shown that the neutral salines in the urine inhibit the change of the quadri-urates to the bi-urates and uric acid.

$$MHU.H_2U + aq. = MHU + H_2U.$$

it is important in some cases to increase the salines in the food. This may be done by—

(*a*) Taking more salt, NaCl, with the food.

(*b*) Increasing the meat in the diet, since meat contains the inorganic salts. For example, the frequency of stone in the children of the poor is thus accounted for, their diet consisting of bread, potatoes, oatmeal, and very little meat. So, in India, where rice is a staple food, stone is common. Again, stone is uncommon in sailors, since they consume plenty of salt.

II. Oxalates.

About one and a half grains are excreted in twenty-four hours. The oxalates are derived from: (*a*) The food; (*b*) gastric fermentation; (*c*) pancreatic disease. Most oxalates of the food are in the form of the insoluble calcium oxalate, e.g., in potatoes, beets, spinach, tea and coffee. The calcium oxalate is not absorbed as such, but probably is decomposed by the HCL of the gastric juice, so that two opposite conditions may arise, viz.:

(1) When there is hyperchlorhydria, i.e., excess of HCL. Then more of the oxalate will be dissolved, and therefore more will be absorbed.

(2) When achlorhydria or hypochlorhydria exists, then, with the HCL diminished, if the diet consist of much carbohydrate there may be abundant fermentation of the fermentable carbohydrate in the stomach or duodenum forming oxalic acid, which comes to the same thing as taking them in the food.

(3) When too much fat in the diet, fatty acids may be in excess and these, combining with oxalates, form soaps which may be thus absorbed.

However, when calcium oxalate crystals appear in a highly acid and highly colored urine long after the urine has been voided, it is said to result from decomposition of urea and is of no clinical importance.

Endogenous production of the oxalates is very small. Generally oxaluria is thought to be an indication of a low state of health.

Patients with oxaluria often suffer from all the symptoms of unilateral renal calculi to the extent even of hematuria, but postural treatment and X-ray are negative. Vesical irritation and frequent micturition may be prominent symptoms. In women the gynecologist has therefore to be on guard not to put down backaches and vesical irritations to uterine displacements or pelvic inflammation without first making a careful examination of the urine.

Oxalate calculi are the commonest calculi removed by operation. Before quantitative examinations were made the uric acid and urates were thought most common.

Renal calculi are seldom composed of one salt, but like a geological formation give a vivid picture of the various stresses and strains through which the individual has passed.

Treatment of Oxaluria.—Since the sources of the oxalates are: (*a*) the food; (*b*) hyperchlorhydria; (*c*) hypochlorhydria, plus gastric and duodenal carbohydrate fermentation, the treatment is indicated:

(1) Limit the amount of oxalate-containing food, e.g., rhubarb, tomatoes, and especially tea. The French medical men look upon oxaluria as the gravel of the poor. Since vegetables and tea contain much oxalates they should be limited, and a generous diet of milk, eggs and meat, except veal, allowed.

(2) Correct disorders of digestion:—

(*a*) Give plenty of hot water an hour before meals.

(*b*) Advise rest and a change of environment for the patient.

(*c*) Prescribe nitro-hydrochloric acid to relieve gastric and pancreatic insufficiency.

(*d*) Modify conditions of the urine so that it will not be favorable to the deposit of the oxalates. The acidity of the urine is to be increased by giving acid sodium phosphate, e.g., 10 grains, t.i.d., since this is the natural solvent of the oxalates.

(*e*) Salts of Mg. may be given, since magnesium forms a soluble double salt with the calcium.

Both the conditions (*d*) and (*e*) may be attained by a meat diet, since meat contains Mg. and increases the excretion of acid sodium phosphate in the urine. Magnesium may also be given as a mineral water, e.g., Kissingen or Hunyadi Janos, but not Apollinaris, since this contains lime.

Potassium citrate is a valuable drug. As a diuretic it dilutes the urine, and by combining with the calcium it forms a non-ionizable double salt, putting the calcium out of action (Martin).

The calcium oxalate calculus is usually single and, on account of its physical appearance, has been called a mulberry calculus. It is usually mixed with uric acid and dark brown or black from admixture of blood pigment. These calculi are seldom found embedded in the kidney substance unconnected with calyces or pelvis of the kidney. They are formed either in the calyces or the pelvis of the kidney.

III. Phosphates.

About two to six grams are excreted in twenty-four hours. The phosphates of Ca. and Mg. constitute about one-third of the total phosphates in the urine. They are derived chiefly from the food. They are only soluble in acid urine, for when the urine is faintly acid, neutral or alkaline they precipitate as "white gravel" the amorphous calcium magnesium phosphate. When the alkalinity is due to ammonia, as in the ammoniaical decomposition of urine, they form the ammonium magnesium phosphate, or triple phosphates. Phosphaturia is due to undissolved earthy phosphates of Ca. and Mg. which are derived largely from the food, and it is usually an indication only of diminished acidity of the urine. For example, after a meal rich in the salts of the vegetable acids or carbonates there may be a temporary phosphaturia.

In children, owing, for example, to intestinal inflammation, calcium is not eliminated by the bowel and may appear in the urine as calcium phosphate (stellar phosphates), without increase in the total phosphorus excretion. This may give rise to scalding urine and frequent micturition.

In nervous and neurotic patients, or those under a severe nervous strain, there may be phosphaturia owing to diminished formation of HCL, on account of a general depression of metabolism. These patients are often dyspeptics and suffer from hyperchlorhydria, constipation, dull aching in the loins, scalding urine, and frequent and unsatisfactory micturition.

In the severe cases, called phosphatic diabetes, besides pain in the back, there may be aching in the suprapubic region and cystitis may arise, but there is no decomposition of the urine. Such pronounced phosphaturia may be a prelude to bacteriuria, especially when accompanied by dyspepsia and intestinal derangement of long standing.

Treatment of Phosphaturia.—

(1) In children the diet should be poor in calcium salts and a partly meat diet substituted for the milk.

(2) In adults, in depressed metabolism, give the patients the mineral acid they cannot make, e.g., nitro-hydrochloric acid dil.

(3) Suitable diet, change of surroundings, relief from worry. When hyperchlorhydria is present, then administer fruits and vegetables more freely in the diet.

(4) When triple phosphates are present in the urine relieve the cystitis.

Calculi of the earthy phosphates are greyish white in color,

hard with irregular or crystalline surface, and are found, as stated, in neutral or slightly alkaline urine.

It is an interesting point of contrast, as Langdon Brown remarks, that neurasthenics tend to oxaluria when they have very acid urine, and to phosphaturia when the urine is not very acid.

646 Spadina Avenue, Toronto.

PROSTATECTOMY *

By William Gunn, M.D., Clinton, Ont.

The fact that members of this Association are expected to take a share in contributing to the programmes is my excuse for this paper, rather than having something illuminating to offer.

The paper refers to some points that impressed me in connection with my own experience in prostatectomies. It contains a brief report of some cases having a bearing on the prognosis. During the last six months we had four suprapubic prostatectomies. By a coincidence, each of these patients was in his 79th year. Four cases are too few from which to form conclusions, but when the age, the complications, and good final results are considered, it must be admitted that the operation is one that may be recommended with considerable assurance.

Case 1: J. McL., 79th year—Referred by Dr. Ross, of Seaforth, who also assisted. Had prostatic troubles for several years. Operation, September 1st, 1914. Suprapubic in one stage. Bladder at operation much distended, as it was impossible to pass the catheter.

Result—Dr. Ross in report says patient has gained twenty pounds in weight. No trouble in voiding or retaining urine; can retain urine all night if he chooses to do so. Feels strong and attends to his duties as rural mail carrier.

Case 2.: D. G., 79th year—Referred by Dr. Case, Dungannon. Entered on catheter life seven or eight years ago. For last two weeks was unable to pass catheter. Two days before coming to Clinton Hospital, bladder was tapped above pubes but refilled. Operation, Oct. 12th, 1914. Bladder distended to umbilicus.

* Read at the Huron Medical Association, March 10th, 1915.

Local anesthesia, bladder opened above pubes, drained and treated for ten days, when prostate was removed through former opening under ether anesthesia. The report of Dr. Case (and patient reported as well), says, "No trouble voiding or retaining urine. Can work with comfort. Voids urine without difficulty twice during the night.

Case 3: Mr. McG., 79th year.—Referred through courtesy of Dr. Burrows of Seaforth, who also assisted. Had bladder trouble for last five or six years. For last year and six months has had a very severe form of cystitis. The presence of small calculi in bladder caused great pain. Catheter used every few hours for last year and bladder washed. Morphine required several times daily. Heart and arteries very fair. Operation, Jan. 13th, 1915. Prostate, and small stones, some of which were imbedded in the gland, removed in one stage. Dr. Burrows' report: "Gaining well in strength and weight. Enjoys life comfortably. Good appetite. No discomfort voiding or retaining urine. Urinates every three or four hours during day and once or twice during the night."

Case 4: A. F., 79th year—Referred by Dr. Anderson of Ailsa Craig, who also assisted. History and symptoms like those of last case. Shortly before operation had symptoms of prostatic abscess. Passed phosphatic sand constantly. Pain excessive, requiring morphine. Differed from last case in that he was a man of massive frame and deep pelvis. Operation in one stage, Feb. 18th, 1915. Much phosphatic debris and gland removed. Result: Wound nearly healed. Patient sits up most of the time, feels well and eats heartily. There is every reason for believing that the final result in this case will be equally as good as in the others.

My first prostatectomy was by the suprapubic route, and the next five by the perineal route and the vertical incision.

These cases all lived, and all but one had good functional results. The latter case relates to a man who occupied a public position for many years and was well known in this locality. The result in his case caused some prostatic sufferers to hesitate, or induced them to go elsewhere for relief. It is therefore but fair that the facts of this case with "impaired function" be stated.

Case With Impaired Function.

Mr. S., age about 60.—About ten years ago was operated on at a large hospital by a well known and competent surgeon. The operation, as I understand it, consisted in opening the bladder above the pubis and cauterizing a wedge-shaped portion of each

lobe. Relief followed, but stones soon formed, and in about six months patient was suffering agonies. This was followed by urinary obstruction, distension, rupture of the bladder, extravasation, and escape of urine at the old scar. Such was the condition when I first saw the case, with Dr. Taylor of Goderich. The bladder was opened by the vertical perineal incision, and stones and gland removed. Owing to the fact that the bladder would only hold an ounce or two of urine, the perineal wound never healed. This condition might be accounted for by contractions after extravasation, the possible effects of the cautery extending beyond the gland, the erosion caused by sharp stones, and the double operation. The patient, however, feels well, enjoys the best of health otherwise, and attends to his ordinary duties. He keeps a soft catheter in the small perineal opening, one end of which empties into a urinal, that is worn. In cases where a permanent drain is indicated, the plan is entirely suitable.

This is the only instance in which we have had a faulty result, functionally. There are, at least, a dozen cases in the counties of Huron and Bruce, that many of you know about, in which there is no trouble either in retaining or voiding the urine.

My first operation has a historical interest, and I shall ask your forbearance while I give a brief report of it also.

My First Operation.

This occurred about twenty-four years ago, and was, I believe, one of the first suprapubic prostatectomies in the province. A brief history will show how I stumbled, so to speak, on the operation. It will also show how the operation might have been accidentally discovered in the first place.

Late one night I was called by Dr. McDiarmid of Hensall, to see a man, aged about seventy, who was in agonies of pain from retention of the urine. Not being able to pass a catheter, and no trocar or aspirator being at all convenient, the bladder was opened above the pubes. The prostate gland was found enlarged to an extreme degree. While the patient was still under the anesthetic it was decided to remove a wedge from each lobe, in order to prevent a recurrence of the trouble. The instruments at our disposal were a knife, scissors, and a double tenaculum; but even these were soon to be laid aside for the finger. An antero-posterior incision was made in the right lobe and the capsule pushed aside to make room for the wedge. It was soon realized that it was no easy matter to cut out a symmetrically-shaped wedge. At the same time it was discovered that the capsule separated easily

from the gland substance by using the finger. It was therefore decided to remove all of the gland that could be taken away, rather than to leave it in a mutilated and shapeless form; and so the whole gland, or nearly all of it, with the prostatic urethra came away. I did my best to save the urethra and was much disturbed for some time because of it. A guarded prognosis was given as to life, and as to function the prognosis was absolutely bad. I even tried to figure out the line of defence in case of an action for damages.

The man recovered and lived in comfort till a few months ago. It must have occurred to many surgeons to remove a wedge from the lobes and in trying to do so the fact that the capsule could be easily separated could hardly have escaped them.

The Operation.

The essentials to a successful suprapubic prostatectomy are eyes in the finger tips, judgment, caution, and reasonable speed. It goes without saying that the results in prostatectomies should improve with experience. As the cases needing such operation are often up in years and run down in health, it is of importance to conserve their energy at every stage of the operation, viz.: (1) before the prostate is reached, (2) in its enucleation, (3) in the after-treatment.

Before the Prostate is Reached.

This stage would include a consideration of the operation in two steps as advocated by some surgeons in nearly every instance. Time forbids a lengthy discussion of this phase of the subject. In my opinion two steps or stages are not required in more than one-fourth of the cases.

In many instances the anoci-associations, mental and physical, connected with two stages, more than offset the good that may otherwise come from them.

It is in deciding between a one-stage and a two-stage operation that judgment plays an important role. Some preparatory treatment, however, is indicated in nearly every case for prostatectomy.

The length of the incision must of necessity vary according to the patient's build. It is of first importance that the tissues adjacent to the bladder be disturbed as little as possible. Damage in this regard may be caused by the clumsy use of retractors tearing tissues apart, and by the operator disturbing unnecessarily the structures in the pubic space below the bladder wall, or in removing fat over the bladder before opening it; all of which tend

to shock, sepsis, and prolonged healing. The beginner is prone to the mistake of opening the bladder too near to the pubis for fear of wounding the peritoneum.

The enucleation of the gland must next be considered. For this almost the sole instrument that I use is a knife of my own design. The knife has a slender straight handle about eight inches in length, with a stout short sickle-shaped blade, having a cutting edge of from one-quarter to one-third of an inch. Guided by the fingers, the blade is plunged into the right lobe towards its upper or back part. Into the opening thus made the finger is inserted and enucleation continued in the lines of least resistance, above, below, backwards and forwards. The object aimed at all the while is to save every portion of the capsule and interlobular septa and to remove the gland substance only. When resistance is met, brute force is not used, but the little knife comes to the rescue. It is passed into the opening in the gland and a short cut made at the seat of obstruction, the direction of the cut being, as a rule, inwards and upwards or towards the abdominal wound. The whole gland may be removed from this opening. I frequently open on the left lobe as well, from which I work with the left hand. The vessels in the gland substance are not large and there is not much bleeding if the operator hugs the gland, as it were, and keeps the capsule to the outside of the finger. When enucleation was carried out in this way, we never had bleeding that called for packing or other measures, besides the parts fall naturally into position after the gland is removed.

As the operator gains experience, he will often dispense with his own fingers or the fingers of an assistant in the rectum and also the use of a catheter in the bladder as a guide.

A clumsy or rough assistant may cause distress and even much damage to the rectal wall. This will be manifest in the after-treatment of the patient.

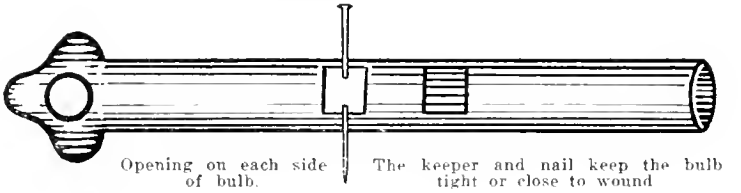
The Sutures. Two only are required. The upper passes through the recti and takes a deep bite of the peritoneal fat, care being taken to avoid the peritoneum itself. The lower one goes through the recti just above the pubes and takes a bite of the tissues below the bladder wall. These are tied loosely and must be removed early if observed to cut. Sloughs are allowed to separate naturally. The patient chooses any position that is most comfortable and is encouraged to sit up for a time (not long enough to tire), on the second or third day. Water is given freely. Urotropin and other medications are at times given with benefit.

A sound or catheter may need to be passed occasionally during the latter stages of healing; but gentleness and great care as to sepsis must be taken for fear of starting an orchitis.

The Drainage Tube.

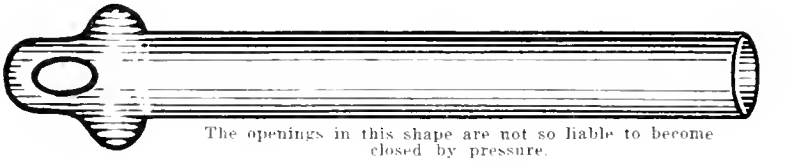
This must be a good size, to facilitate the washing away of clots, and may be required for the first day or two. The tube must be short enough so that it will not press on the neck of the bladder. The only drainage tube that is of practical value in

These and similar shaped tubes are the only ones of service to protect dressings. By stretching with a round stick inside they can be reduced to the size of an ordinary catheter. When in position the bulb resumes its form and acts as a plug or cork.



Opening on each side of bulb.

The keeper and nail keep the bulb tight or close to wound



The openings in this shape are not so liable to become closed by pressure.

saving the dressings is made after the accompanying drawings. The tube that is on the market with a lug on each side is of little use. In order to plug the opening in the bladder, the bulb requires to be fairly firm as well as stretchable. I am having some tubes made of different sizes and shapes which it is hoped will serve the purpose.

MEDICAL NOTES ON ENGLAND AT WAR

By Sir William Osler.

Frost-Bites and Cold-Bites.

The outstanding feature of the recent admissions to the hospitals from the front has been frost-bite, a very unusual condition in British practice. The cold has been severe in North-west France and Belgium; the men have had long exposures in the trenches, from the effects of which thousands are suffering with sore feet. To wear boots and stockings continually for a week or ten days soaked in cold mud or water and mud, passing long hours in the upright position, naturally causes vasomotor paresis with swelling, and the prolonged stasis has led in not a few cases to necrosis. The cases varied extremely. In the first place there may be nothing more than aggravated chilblain, with the stages of protracted venous stasis, edema, bullae and superficial necrosis. A lad at the Canadian Hospital, Beechborough Park, had slight tenderness of his feet which had only been swollen and blue, but over the backs of both hands and knuckles were areas of superficial necrosis. He had been in the trenches for days, his hands had been swollen, particularly the backs, and he was completely incapacitated.

Secondly, there have been cases of genuine frost-bite; the temperature was protractedly low, and widespread necrosis followed; but several men with necrosis of the toes assured me that the water in which they had stood had not been frozen. In the sequel of events no doubt all of these lacked the preliminary complete anemia of ordinary frost-bite. Gangrene never follows this stage directly, but the succeeding condition of stasis in veins and capillaries. A very common form has been great swelling, with lividity, blackness of the toes, with a slight necrosis of the superficial skin of the pads, or shedding of the nails. As in Raynaud's disease, the final condition is often very much better than one could have anticipated from the appearance of the feet at first. A man at Paignton had a curious distribution of the necrosis, confined to the sole of one foot.

Thirdly, with these conditions, with which all are familiar, there have been an unusually large number of cases to which the term "cold-bite" is more applicable. The men return with swollen

feet, vasomotor paresis, not necessarily with much pain but with disability due more to the swelling, and sometimes to the great stiffness of the toes. The desquamation of the skin and hemorrhages beneath the nails indicated that this was a sequel of much more serious condition. More unusual cases have been without any obvious change, the feet looking normal but with an extreme degree of cutaneous hyperesthesia, so that the slightest touch caused wincing and the feet had to be constantly protected with a cradle. Sometimes the pain was spontaneous, or it would come on at night; but in many instances it was brought out only on attempting to stand, or when the patient was touched, or the foot moved. In several cases it was a "stocking" hyperesthesia reaching just above the ankle. One patient in the convalescent home at Blenheim Palace had evidently suffered intensely, and was badly knocked out in his nervous system. Others have shown marked neurasthenic or even hysteric manifestations. The truth is, the trenches have been a veritable hell, and it is not surprising that a good many of the men show signs of severe nervous shock.

The Low Mortality Among the Wounded.

It is intensely interesting to see a set of severe cases some weeks after their admission. Extraordinary results follow even in the severest type of cases. At the American Hospital, patients whom I never expected to see alive were up and about and doing remarkably at the end of a month. A man with the surface of the trochanters bare and the lower end of his thigh infected severely had the wound cleaned, and a nice amputation made, with a good stump. A man with a part of the sacrum blown away and the rectum exposed from behind had gained 10 or 12 pounds in weight, the wound was healing rapidly and the fecal fistula had healed. One is immensely impressed with the good results of treatment and the very low rate of mortality. At the Base Hospital here, among more than 3,000 cases there have been about a dozen deaths. At the Cambridge Hospital among the first 3,500 patients admitted only fifteen died—a mortality of 0.4 per cent. At the American Hospital, Paignton, there has been only one death among 700 patients—a mortality of 0.14 per cent. It has been very satisfactory to note the absence of tetanus in the recent admissions and that cases of gas gangrene have been fewer.

An Aneurism Case.

I mentioned in my first letter the case of a Belgian at the Beechborough Canadian Hospital in whom the bullet passed

through the mouth under the jaw, beneath the skin of the neck, and lodged below the left clavicle; the cervical triangle was filled with a pulsating mass. When first seen it looked like an ordinary traumatic aneurism, and I felt sure that an artery must have been wounded; but after Dr. Armour had removed the bullet and relieved the tension, the pulsation ceased, and the second time I saw the patient there was nothing but the firm indurated swelling above the clavicle with disability of the arm from pressure on the nerves. Then he began to bleed freely from the throat and from the wound, and it was quite evident that an artery had been opened. Dr. Armour operated and found that the bullet had nicked the subclavian artery, which he tied successfully, and the man has made a complete recovery.

Cerebrospinal Fever.

Medically, the most disturbing incident has been the outbreak in various camps of cerebrospinal fever, a rare disease in this country. There had not been a very bad epidemic during the nineteenth century, but in 1905-1906 Belfast and Glasgow suffered severely, and there has been an increase in the sporadic cases during the past three years. The first Canadian contingent apparently brought the disease with them, as there were four cases at Valcartier and three cases on the voyage. There was no additional case until recently, and they have had in all about twenty-five or twenty-six, with eleven or twelve deaths. I went last week to the camp at Salisbury to see the cases. The weather has been appalling, much wind and more rain, and everywhere the mud has been ankle-deep. At the General Hospital, Netheravon, under the care of Dr. Murray Maclaren of St. John and Dr. F. G. Finley of Montreal, there were many cases of bronchitis, bronchopneumonia and rheumatism. Most of the men, however, looked very fit and seemed to have stood the hardships very well. A new hospital had just been opened for the cerebrospinal fever cases, of which there were eleven under treatment. I found a well-equipped laboratory and a full staff of workers under Dr. Arkwright of the Lister Institute, who has done much work on the meningococcus. Dr. Ellis, who has been at the Rockefeller Hospital, New York, for the past four years and who is an expert in all methods of intrathecal treatment, was in charge of the clinical work. They had only just begun a systematic investigation of the contacts, and when I left they had not detected any carrier. It is not likely that the epidemic will prove serious. It is alarming, though, as

there is another infected camp not far away in the English troops, and in the city of Salisbury itself there have been ten cases and seven deaths. I was afraid at first that the Canadians were responsible for bringing the infection, but it is evident that, as is usually the case, sporadic outbreaks are occurring in different parts. There have been a few cases at Haslar; I saw two cases at the Millbank Hospital, both from the Eastern counties, and on the thirtieth I visited the Shorncliffe Camp, where they have had eight deaths, and a few cases remained in hospital. It is interesting that this is the only place during the nineteenth century that the disease appeared among soldiers.

Typhoid Fever.

There is extraordinarily little typhoid fever among the recruits or in the patients in the hospitals from the front. Sir Frederick Treves in the *Times* of to-day gives the returns of the British troops in the present campaign—421 cases, 305 in men who were not inoculated. In the 421 cases there have been thirty-five deaths; of these thirty-four were men who had not been inoculated within two years; only one death occurred among patients who were inoculated and that man had been inoculated only once. The "Anti's" are causing a great deal of trouble in distributing their pernicious literature among the soldiers. It is a thousand pities the government does not take its courage into both hands and order compulsory inoculation. It is evidently going to be a "long, long way to Tipperary" in this war, and should typhoid fever within the next eighteen months play the same rôle as it did in the South African War, the bacillus of Eberth might very well be one of the determining factors in deciding on which side victory will fall.

Everywhere preparations are in progress for the spring and summer campaign. New hospitals are being built to meet the heavy demand when, for the first time in its history, this country will have more than 1,500,000 in the fighting line. We have had orders for another 500 beds in Oxford, which will be arranged for in barracks in the Radcliffe Observatory Field close to the Radcliffe Infirmary. Waldorf Astor, Jr., has given his beautiful place at Clevedon on the Thames as a Canadian Base Hospital, and between the house and the barracks erected on the grounds there will be 500 beds.

Death of Professor Van Gehuchten.

A tragic event, of which you have already heard, was the death of Professor Van Gehuchten. He had settled very happily

at Cambridge working at the Research Laboratory with Dr. Strangeways, and we were so glad to be able to put him on the Rockefeller list. He died suddenly after an operation for volvulus. How the poor fellow and his family suffered at the Louvain tragedy is told in the *British Medical Journal*, January 16th.

ONTARIO WORKMEN'S COMPENSATION

Medical Attention.

In regard to medical attention it is stated that the question is frequently asked, what should employers do, or what should they instruct their foremen to do, in regard to medical attention when an accident happens to an employee. The Workmen's Compensation Act, it is pointed out, does not deal at all with the question of medical attendance or medical fees therefor, except in fatal cases where there are no dependents. It is pointed out, however, that the Board is not indifferent to this aspect of the matter, and that, apart from the humanitarian side of the question, it is not in the interest of the Board or of employers that payment of compensation should be prolonged by lack of necessary medical or surgical attention. An injured employee should be taken to the nearest doctor or hospital as quickly as possible, and the Board hopes that any co-operative or other arrangement now existing for such service will be continued. There is nothing in the Act to prevent arrangements for such hospital or medical service. Unless there is some co-operative arrangement for medical aid, the injured workman must of necessity pay his own medical expenses. It is pointed out, however, that in serious cases there is the certainty, if reports are promptly made, that compensation will be made without delay, and money will thus be available which will enable injured workmen to pay their medical or hospital fees, which it is believed they will generally be found willing to do, but should any workman not be willing to pay what is reasonable, the power given to the Board to permit attachment of the compensation may be invoked. It is suggested that mutual co-operation and assistance among employers, employees and physicians in all these matters will be to the advantage of all, as well as a great assistance in the work of the Board.

Reporting of Accidents.

The Board, it is stated, will very much appreciate promptness and care on the part of both employers and workmen in making reports of accidents, and upon this will depend in large measure

the quick handling of claims. An ample supply of forms will be sent to employers upon request. The employer is required by Section 99 of the Act to report to the Board, within three days, every accident which disables a workman from earning full wages. If the accident is so slight that the disability will be less than seven days (and therefore not affording the right to compensation) the short form of notice (Form 5) or a letter or other writing to like effect, will be sufficient; but where the disability will continue for seven days or more, Form 7 is required. If this form can be filled up and sent within the three days, the short form may be dispensed with, but if not, it is stated that Form 5 should be sent within the three days, and Form 7 should follow as soon as possible. Where it is doubtful if the disability will last seven days, it is suggested that it will be better to use Form 5 and await results, and if it is found that the disability does last seven days, Form 7 should be sent on the eighth day after the accident. In every case where any notice or report of an accident has been given to the Board, no matter what the length of the disability, the employer should, as soon as the workman has returned or is able to return to work, report that fact immediately to the Board, and for this purpose Form 9 may be used. Form No. 6, it is stated, is to be filled out and sent to the Board by the workman if he is disabled for at least seven days from earning full wages. Report Form No. 8 is to be made by the doctor who attended the injured workman. In this connection the Board draws attention to the desirability of physicians and surgeons throughout the Province co-operating with the Board; that while the law does not permit the Board to pay for medical attention to injured workmen it may be pointed out that the liberal compensation now payable and the fact that it is payable in a vastly larger number of cases than where damages could formerly have been recovered, will render this class of patients, on the whole, better able than heretofore to meet the doctor's reasonable charges. —*The Labour Gazette.*

THE SEVENTH PAN-AMERICAN CONGRESS

will meet in San Francisco, June 17th-21st, inclusive. It assembles pursuant to invitation of the President of the United States issued in accordance with an Act of Congress approved March 3rd, 1915.

The countries and colonies embraced in the Congress are the Argentine Republic, Bolivia, Brazil, Canada, Colombia, Cuba,

Chile, Costa Rica, El Salvador, Ecuador, Guatamala, Honduras, Haiti, Hawaii, Mexico, Martinique, Nicaragua, Panama, Paraguay, Peru, Santo Domingo, United States, Urugnay, Venezuela, British Guiana, Dutch Guiana, French Guiana, Jamaica, Barbadoes, St. Thomas and St. Vincent. The organization of the Congress is perfected in these countries and the majority of them have signified their intention to be represented by duly accredited delegates.

The Congress will meet in seven sections, viz.: (1) Medicine; (2) Surgery; (3) Obstetrics and Gynecology; (4) Anatomy; Physiology, Pathology and Bacteriology; (5) Tropical Medicine and General Sanitation; (6) Laryngology, Rhinology and Otology; (7) Medical Literature.

All members of the organized medical profession of the constituent countries are eligible and are invited to become members. The membership fee is $5.00 and entitles the holder to a complete set of the transactions. Advance registrations are solicited and should be sent with membership fee to the Treasurer, Dr. Henry P. Newman, Timken Building, San Diego, California.

The general railroad rate of one fare for the round trip, good for three months, made on account of the Panama-Pacific Exposition at San Francisco, and the California Exposition at San Diego is available for the Pan-American Medical Congress.

The Palace Hotel will be headquarters.

The first Pan-American Medical Congress was most successfully held in the United States in 1893. Five intervening Congresses have been held in Latin American countries. It now devolves upon the medical profession of the United States to make this, the seventh, the most successful in the series. Charles A. L. Reed, President Union Central Building, Cincinnati; Harry M. Sherman, Chairman Committee of Arrangements, 350 Post St., San Francisco; Ramon Guiteras, Secretary General, 80 Madison Avenue, New York City; Philip Mills Jones, Special Committee on Hotels, 135 Stockton Street, San Francisco.

Reviews

1 *Text Book of Medical Jurisprudence and Toxicology.* By John Glaister, M.D., D.P.H. (Camb.), F. R. S. E., Professor of Forensic Medicine in the University of Glasgow, &c., &c. Third edition, with 130 illustrations and one colored plate. Price, fifteen shillings net. Edinburgh, E. & S. Livingstone.

All medical men who are coroners, those who are not, lawyers and students will welcome this new edition of an excellent text-book. It is very complete and one of the most useful books we know of upon this subject. There is a short sketch of the General Medical Council, its duties and statutory powers, as well as its penal resolutions. The work as a whole has been brought up to present-day requirements and advancements. As a work upon medical jurisprudence and toxicology, it may be heartily recommended to all.

The General Index to the last ten volumes of the Annals of Surgery has just been prepared.

This book has been especially prepared for the convenience of readers of *Annals of Surgery*, and we are supplying them with copies for $1.00 each. This amount merely represents just about what it costs us to prepare, print and bind it.

If it proves of any service to you in referring to your volumes of the *Annals* we shall be very glad. Philadelphia: J. B. Lippincott Company.

Dominion Medical Monthly

And Ontario Medical Journal

EDITED BY

Medicine: Graham Chambers, R. J. Dwyer, Goldwin Howland, Geo. W. Ross, Wm. D. Young.

Surgery: Walter McKeown, Herbert A. Bruce, W. J. O. Malloch, Wallace A. Scott, George Ewart Wilson.

Obstetrics: Arthur C. Hendrick.

Pathology and Public Health: John A. Amyot, Chas. J. C. O. Hastings, O. R. Mabee, Geo. Nasmyth.

Physiologic Therapeutics: J. Harvey Todd.

Psychiatry: Ernest Jones, W. C. Herrman.

Ophthalmology: D. N. Maclennan, W. H. Lowry.

Rhinology, Laryngology and Otology: Geoffrey Boyd, Gilbert Royce.

Gynecology: F. W. Marlow, W. B. Hendry.

Genito-Urinary Surgery: T. B. Richardson, W. Warner Jones.

Anesthetics: Samuel Johnston.

GEORGE ELLIOTT, MANAGING EDITOR

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COMMENT FROM MONTH TO MONTH

Pneumonia, Tonsillitis, Rheumatism, Organic Heart Disease offer a great field for endeavor on the part of the medical officer of health. Smallpox has been stayed in its ravages. Diphtheria vies with smallpox in being one of the lesser evils. Typhoid fever is well understood and, consequently, easily kept within bounds. Tuberculosis is being mastered. During 1913 there were 2,076 deaths from pneumonia in Ontario. It is likely pretty much the same in every province. It is not yet a notifiable disease, but it is a germ disease, and its great toll of human life cannot much longer be permitted to pass unchallenged. The intimate relationship of tonsillitis, rheumatism, and organic heart disease calls for serious consideration of tonsillitis, necessarily as the initial step in the prevention of this triad. Organic heart disease heads the list in "The Highest Causes of Death," in Ontario—2,829 deaths in 1913.

It is not an unusual occurrence to see tonsillitis, or so-called "sore throats," running through almost an entire family. Iso-

lation and quarantine of every case of tonsillitis should be compulsory at an early date.

In addition to the recognized communicable diseases and infantile mortality, medical officers of health should begin to take into consideration preventive measures looking towards the lessening of tonsillitis, rheumatism, organic heart disease and pneumonia, as well as cancer. Whilst the good work inaugurated against smallpox, diphtheria, typhoid fever, tuberculosis, and infant mortality will continue to be prosecuted with the utmost vigor, the enormous loss of life through other sources must not be any longer neglected.

Gonorrhea, syphilis, and chancroid are coming, but the public are scarcely ready for this step, whereas they would readily acquiesce in preventive measures involving the others.

"FROZEN FEET" IN THE SOLDIER

A communication based upon a large number of observations by himself and others has been made by an eminent French surgeon to the Academy of Medicine, Paris, on so-called "frozen" feet occurring among the soldiers in the trenches. It has been found that actual cold has been far the least important factor. They have occurred in conditions where the temperature has never fallen to freezing point. Still, these false "frostbites" have all the appearance of true ones, complete dropping off of the toes having taken place in some cases. They are true troubles of local nutrition through the constriction of the feet by the footgear, and were seen mostly in the French soldiers in consequence of the bandages used by them as puttees. The condition was aggravated by the dampness which caused softening of the tissues and shrinking of the bandages. Combined with this were the inadequately watertight boots, often too tightly laced. The Russian and German troops use waterproof and sufficiently loose footwear, and have thus been enabled to control these epidemics. Prevention of frostbites can be carried out by the suppression of bandages, loosening the laces, the application of fatty substances to the entire foot and leg—oiled paper or greased socks—whilst the soldier is in the wet trenches. In some cases removal of the boots twice a day acted well as a preventive.

Editorial Notes

RELIEF BELGIAN MEDICAL AND PHARMACY PROFESSORS

Amount not previously acknowledged:—Manitoba Executive Committee, fourth remittance, 372.50; Dr. Paul Scott, $25; Dr. J. E. Elliott, $11; Dr. Large, $5; Dr. Grant, $3; Dr. J. S. Burris, $10; Dr. H. L. Burris, $5; Dr. T. Kearney, $2; Dr. J. H. Clements, $3; Dr. D. Macklin, $10; Dr. Ford, $10; Dr. Rutherford, $10; Dr. Deacon, $10; Dr. Quinlin, $10; Dr. Smith, $10; Dr. Monteith, $10; Dr. Fraser, $10; Dr. Gemmell, $10; Drs. Rankin & Cannon, $10; Drs. J. A. & L. Robertson, $10; Dr. Forester, $10; Dr. Maynard, $5; Dr. Gregory, $2; Dr. Nasmyth, $2; Dr. Allen, $2; Dr. Easson, $2; Dr. McKenzie, $10; Dr. Armstrong, $10; Dr. Hodge, $10; Dr. Burley, $10; Mr. Muir, $2; Dr. Smith, $10; Dr. Hurlburt, $5; Dr. Smith, $10; Dr. Fraleigh, $10; Dr. Stanley, $10; Dr. Brown, $10; Dr. Knox, $10; Dr. Tye, $10; Dr. Campbell, $10; Dr. King Smith, $6; Mr. J. B. Dimmick, $10; Mrs. J. B. Dimmick, $10; Dr. Galloway, $3; Dr. C. L. Starr, $10; Dr. J. Livingstone, $1; Dr. E. Boyd, $5; Dr. W. E. Gallie, $5; Dr. Alan Brown, $5; Dr. G. A. Campbell, $5; Dr. Roy Smith, $1; Dr. Allan Baines, $10; Dr. D. McGillivray, $5; Dr. Alan Canfield, $5; Dr. A. C. Bennett, $2; Dr. B. Hannah, $5; Dr. Joe Graham, $5; Medical Men of Guelph, $60; Vancouver Doctors and Druggists, $360; Dr. Hubbard, $10; Dr. W. F. Clarke, $5; Dr. F. N. G. Starr, $25; Dr. E. A. Robertson, $2; Dr. J. T. Gilmour, $15; Dr. C. H. Gilmour, $10; Dr. W. J. Harrington, $5; Dr. Deacon, $1; Dr. R. B. Cuthbertson, $5; Dr. W. Rogers, $5; Dr. Bottomley, $5; Dr. Wright, $5; Dr. Heaslip, $2; Dr. Robson, $2; College of Physicians and Surgeons, Manitoba, $1,000; College of Physicians and Surgeons, Victoria, B.C., $263; from Nova Scotia, per Dr. Lindsay, $487; Dr. Park, $10; Dr. Hall, $10.

THE SECRET OF GERMAN HATE

What has been the state of mind of the German people which gave birth to the "Hymn of Hate"? Here was a people ordinarily painstaking, slow, plodding, not in the least funny, suddenly bursting forth into furious rage against the British. Was it to Kaiser, Kultur, Nietzsche, the British Navy? No. It is

to the bread and the resulting dyspepsia. German hatred grows by and is fed on "V" bread. Now made up of 80 per cent. wheat flour, 10 per cent. rye, and 10 per cent. potato meal, the result is that there is too much starch with the potato meal added. Millions of dyspeptics who are irritable, despondent, naturally become grouchy. They cannot help it. What will it do in the present isolated economy of the German nation do to Germany itself? The soldiers, living on the fat of the land of France and Belgium, do not evidence the same bitter hatred as the German people. "Their livers are as yet unwrung." They do not get potato bread. Thus is Germany's case diagnosed. Her own treatment for her people may help materially to effect a cure.

DANGERS OF THE WRIST WATCH IN WARFARE

Considerable use of the wrist watch is to be found in all the armies of the different belligerents. It is generally worn on the left wrist, although, as a result of their exposed position, the left hand and forearm are very frequently hit by the infantry bullets. When high velocity projectiles chance to strike the watch fairly, the effect is to shatter it into unrecognizable fragments. These fragments are often driven directly into the bones of the wrist, hand or forearm, the resulting damage being so radical that no treatment can restore the industrial use of the arm to the patient. Many of these injuries have been reported in the German army. If the precaution has not already been taken, prohibition of the wrist watch altogether will likely be adopted.

TYPHOID FEVER AMONGST BRITISH FORCES

The Press Bureau of the War Office issued on March 4th a statement of the distribution of the cases of typhoid fever occurring in the British forces in the field. That anti-typhoid inoculation has been proven of great value is seen by a comparison of the uninoculated, the fully inoculated, and the partially protected. There were 359 cases of uninoculated with 48 deaths; fully inoculated within two years (two doses) 144, one death; partially protected (one dose) 136, one death; total 606, 50 deaths. Of the total of 50 deaths, 48 were among the uninoculated, giving a percentage of deaths of 13.364; among the fully inoculated and partially protected, only 0.79 per cent.

News Items

Peterboro medical men will form a base hospital unit.

Fire destroyed the Lakeside Home of the Sick Children's Hospital, Toronto, in April.

The Canadian Militia Department is calling for 100 additional Canadian medical practitioners to serve in England, France and Belgium.

Do not forget the dates of the meetings of the Ontario Medical Association and the Health Officers of Ontario, in Peterboro, May 25th-28th.

When the second Canadian contingent arrives in England, Canada will have over 300 doctors serving in England, France and Belgium.

The Academy of Medicine, Toronto, held its annual meeting on the afternoon of the 4th of May. Dr. W. H. B. Aikins was elected President.

Dr. J. G. Fitzgerald, assistant professor of hygiene, University of Toronto, will have charge of the sanitary arrangements of the Niagara Camp.

Dr. W. G. Anglin, Kingston, Ontario, who will be chief surgeon with Queen's stationary hospital, has been granted the rank of Lieutenant-Colonel.

Drs. John Amyot and Walter McKeown, Toronto, were recently banqueted by many friends in the Ontario Club. Both were presented with wrist watches.

The many friends of Dr. George S. Ryerson, Toronto, are expressing their sympathy in the death of one son, killed in action in France, and another son, severely wounded.

As announced editorially in last issue, the meeting of the Canadian Medical Association in Vancouver, this year, has been cancelled; also the annual meeting of the Canadian Association for the Prevention of Tuberculosis.

Dr. John Ferguson, Toronto, presided at the annual meeting of the Canadian Fraternal Association, held in Toronto the last week in April. Dr. W. S. Harrison, Toronto, was elected President, and Dr. George Elliott, Toronto, Chairman, of the Medical Section.

Mr. Irving Heward Cameron, M.B., LL.D., Professor of Surgery in the University of Toronto, has tendered his resignation. Mr. Cameron has been long connected with medical teaching in Ontario, and has been considered one of the best informed medical men in Canada.

Thirty-five doctors from Ontario, including 14 from Toronto, have been accepted by the Militia Department for commissions in the British R. A. M. C. About 130 applications were received from this Province. The following are the names of those who have been accepted:

E. F. Frederick, 300 Charlotte Street, Peterboro, Ont.; J. F. McLay, Grimsby, Ont.; J. W. Sutherland, 67 Third Avenue, Ottawa; G. C. Anglin, Weston, Ont.; T. O. Hutton, 360 Queen Street, Sault Ste. Marie; Victor McWilliams, 427 Bloor West, Toronto; W. E. Pickup, Fort William; J. C. McLeod, Kincardine; A. F. Mavety, 173 Mavety Street, West Toronto; R. E. Hotkins, St. Michael's Hospital, Toronto; J. N. Humphrey, Wellesley Hospital, Toronto; F. M. Walker, Toronto; H. W. Kerfoot, Hospital for Insane, Penetang; K. G. McKenzie, Stationary Hospital, Exhibition Camp; F. W. M. Smith, Bayfield; N. King Wilson, 380 Bloor Street West, Toronto; O. W. Colbeck, Haileybury; A. Henderson, 152 Wilton Avenue, Toronto; R. Tennent, Belleville; E. A. Urie, Guelph; C. F. Wright, Iroquois Falls; F. J. Livingstone, Hospital for Sick Children; M. H. Patterson, Hospital for Sick Children, Toronto; Austin Evans, Whitby; H. Crasswaller, 133 Ouellette Avenue, Windsor; J. V. Brown, Stationary Hospital, Exhibition Camp, Toronto; R. L. Shields, Port Hope; W. J. Marcey, Parry Sound; F. J. Colling, College Street, Toronto; A. H. Machlen, Goderich; L. M. Dawson, 5 Irving Avenue, Ottawa; K. M. Simon, 653 Bloor West, Toronto; R. H. Bonnycastle, Campbellford; J. J. Middleton, 653 Bloor Street West, Toronto; J. Edward Knox, Toronto.

Publisher's Department

3,000 Cars in March—Canadian Ford Plant has Built Wonderful Business—Factory Speeding to keep up with Orders.—Ford, Ont., April, 1915.—"Faster" is the cry at the plant of the Ford Motor Company of Canada, Limited, these days. Although 3,000 Ford cars were shipped during March, a remarkable figure in itself, this is not enough, and 3,600 is the goal set for the factory to reach during April, while every possible means of increasing the output is being employed.

Since the first of the year sales have been growing at an astonishing rate, and with this ever-increasing demand, as indicated by the orders now on hand, factory production will have to be pushed hard to keep up with the demand.

A rate of 150 cars per day has been reached by the factory, and even this may be beaten. The week of March 29th marked the largest output in the history of the company, and on Saturday, which is a half-holiday 81 cars were made by noon. Although Friday, April 2nd, was a legal holiday, it was necessary to keep the plant in full operation all day. The largest single day's shipment ever recorded was on April sixth, when 163 Ford cars were sent out from the factory.

While these figures pay an excellent tribute to the Ford car, and its makers, they also afford a strong indication of better business conditions throughout the Dominion.

The Pneumonia Convalescent.- While the course and progress of acute lobar pneumonia is short, sharp and decisive, the impression made upon the general vitality is often profound, and apparently out of proportion to the duration of the disease. Even the robust, sthenic patient is likely to emerge from the defervescent period with an embarrassed heart and general prostration. In such cases the convalescent should be closely watched and the heart and general vitality should be strengthened and supported, and this is especially true as applied to the patient who was more or less devitalized before the invasion of the disease. For the purpose indicated, strychnia is a veritable prop upon which the embarrassed heart and circulation can lean for strength and support. As a general revitalizing agent is also needed at this time, it is an excellent plan to order Pepto-Mangan (Gude), to which should

be added the appropriate dose of strychnia, according to age, condition and indications. As a general tonic and bracer to the circulation, nervous system and the organism generally, this combination cannot be surpassed.

A New Proteid-Silver Compound.—An agent for the treatment of acute inflammations of mucous membranes is being announced by Parke, Davis & Co., and promises to meet a real need in medical practice. It is a soluble silver-proteid—an active germicide, astringent and sedative—and is offered under the name of Silvol. The product contains about twenty per cent. of silver. It occurs in scale form, has a dark metallic appearance, and is readily soluble in water. Silvol solutions are not precipitated by proteids or alkalies or any of the reagents that commonly affect other silver compounds in solution. They do not coagulate albumin or precipitate the chlorides when applied to living tissue.

The use of Silvol is suggested in the treatment of acute gonorrhea and inflammatory affections of the eye, ear, nose, throat, vagina, etc. The product is supplied in bottles containing one ounce and in six-grain capsules (bottles of 50). It is non-irritating and non-toxic in proper solutions.

The Arrest of Tuberculosis.—Great interest has been aroused recently among medical men by the reports of the splendid results being obtained in the treatment of tuberculosis, even in the later stages, by the so-called "intensive use of iodine." Thus far the great bulk of this work has been done abroad, but for some time in this country quite a good many practitioners have also been applying this line of treatment with results no less striking and positive.

As a matter of fact, much impetus has been given to the proposition in the United States by the availability of Burnham's Soluble Iodine, an iodine preparation that is especially adapted to meet the requirements of the "intensive method." These requirements are essentially (1) the use of large doses, (2) for long periods and (3) without toxic or harmful effect. Many and various were the iodine salts and products tested, but all proved disappointing in one way or another with the exception of Burnham's Soluble Iodine. Careful conservative trials showed that this preparation was indeed soluble, that it was free from

the irritating action of other iodine products, and could be given in exceptionally large doses without disturbing the digestion or producing toxic effect. It was evident, therefore, that Burnham's Soluble Iodine, by virtue of its rapid and uniform absorption and freedom from toxicity, could be administered in a dosage never before possible with the ordinary iodine compounds. As a consequence, the clinician has been able to use this preparation in tuberculosis in quantities that assured the full physiologic effects of iodine with a pronounced counteraction of the toxins, an activation of the nutritional processes, an increase in the elimination of waste products, and a marked stimulation of phagocytosis. Bondreau claims that the intensive iodine treatment has a profound stimulating influence on all of the internal secretions, a result that is in effect an indirect, or auto, organotherapy. The action of Burnham's Soluble Iodine on all glandular functions and the marked impetus given to bodily metabolism would seem to substantiate this conclusion.

For the first few days after beginning the use of Burnham's Soluble Iodine there is little or no appreciable effect; in fact, there may be a slight increase in certain symptoms due to the reactions set up, and the initial stimulation of elimination. In a few days, however, the beneficial effects of the treatment appear, the temperature drops perceptibly, the cough decreases, and sputum steadily becomes more mucous and rapidly diminishes in amount. The night sweats grow less, insomnia is relieved, and the other symptoms show corresponding improvement. The appetite soon increases, the digestion improves and a progressive gain in weight is noted. Gradually the physical signs show a change for the better and the patient's whole condition is substantially improved.

In conclusion, it can be stated without exaggeration that no remedy being used to-day in the treatment of tuberculosis holds such remarkable possibilities as Burnham's Soluble Iodine. The whole situation may be summed up in the statement that just as iodine is the logical remedy for all tuberculosis conditions, so is Burnham's Soluble Iodine the logical form in which to administer it.

A valuable little treatise recently prepared on "The Arrest of Tuberculosis" gives very explicit advice concerning the successful application of the "intensive iodine treatment of tuberculosis." Sent free to physicians on request. Address, Burnham Soluble Iodine Co., Auburndale, Mass.

Newport is going to be to a greater extent than ever before the centre of fashionable life in the United States this summer. The fact that Americans and Canadians of wealth and social position who have been in the habit of spending two or three months of each summer in Europe will not find the way open to the famous watering places of the Continent, routes of European travel being practically closed, and the advice of authorities familiar with the situation being against visits to Europe for any other purpose than actual business, will cause all eyes to turn to the most famous and exclusive watering place in the United States.

There has just been signed by the directors of the Vanderbilt Hotel, New York, a lease which is of tremendous importance, not only to Newport, and the summer colonies there, but to all American travellers, especially those who appreciate the delights of perfect cuisine and service "Hilltop," the residence for more than thirty years of the late Richard M. Hunt, the famous architect, at Newport, has been taken over for a term of years and after extensive alterations and improvements will be opened late in the spring as the Hilltop Inn.

There will be a limited number of suites and rooms for guests at the Hilltop Inn. These are all large and will be furnished in exquisite taste. The fact that there will be guest rooms has led to a belief among those who have been familiar with the plans of the undertaking that the Hilltop Inn is the forerunner of a great fashionable hotel in Newport somewhat along the lines of the Vanderbilt Hotel. Manager Marshall, when asked about this report, denied that such a hotel in Newport was at present contemplated by the Vanderbilt Hotel Directors.

The grand opening of the Hilltop Inn is set for June 1st. However, it is expected that the alterations and improvements will be completed before that time and that visitors will be received in advance of the formal opening.

Dominion Medical Monthly
And Ontario Medical Journal

Vol. XLIV. TORONTO, JUNE, 1915 No. 6

Original Articles

PRESIDENTIAL ADDRESS — ONTARIO MEDICAL ASSOCIATION*

By D. J. Gibb Wishart, B.A., M.D., Toronto.

Fellow-members of the Ontario Medical Association:

This gathering to-night in the city of Peterborough marks an epoch in the history of our branch of the Canadian Medical Association, in that for the first time in our history, we have elected to hold our sessions in one of the smaller centres. The burden thus thrown upon a comparative few of our medical brethren has been, as you will agree from the welcome you have already received, most loyally shouldered, and the experiment has become a complete success. On your behalf, I beg to thank Doctor Cameron and the members of the Peterborough Medical Society for their hard, resolute and unfailing labor in the preparation involved for our gathering here this week.

For the first time, too, we meet in conjunction with the Provincial Officers of Health, and I trust that the result of this union of effort will be followed up by a continuation of these combined meetings. It will benefit both associations. United we stand, divided we might fall.

Before proceeding to the subject proper of my address this evening, I must beg your forbearance while I refer to several matters of common interest to us as professional brethren.

We are, as a nation, in the midst of a great war, and we, as a profession, have risen to the emergency in Canada, and therefore naturally in the Province of Ontario.

> "Remember when those tales you read
> Of rude but honest 'Canayen,'
> That Joliet, La Verandrye,
> La Salle, Marquette, and Hennepin,
> Were all true 'Canayen' themselves—

* Delivered at Peterborough, Ontario, May 26th.

And in their veins the same red stream
The conquering blood of Normandy
Flowed strong, and gave America
Coureurs de bois and voyageurs
Whose trail extends from sea to sea."

It is a matter of pride to be able to state that thus far we have provided:

1. A Base Hospital, No. 4, from the University of Toronto, of 1,040 beds, a staff of thirty-five physicians and surgeons, and twenty medical students in the rank and file.

2. A Casualty Clearing Hospital, No. 2, with a staff of physicians and surgeons, and over thirty-nine medical students and young graduates in the rank and file.

3. Two further hospitals have been offered to the Government, one by the Western University, and the second by the Medical Society of the city in which we are meeting now. The handsome offer of the Peterborough Medical Society, which numbers twenty-five all told, was to furnish a Stationary Hospital with medical staff, thirty-five nurses and rank and file, together with the needful supplement of the Government issue in the way of initial supplies, and in addition, to guarantee $350.00 per month until the close of the war, to be used for comforts and necessities for the men. It will be difficult to find an equal of this offer, and you will agree with me that the Peterborough medical men are a force to be reckoned with. Congratulations to the Medical Society of Peterborough!

4. Over forty medical officers have accompanied regiments and field ambulances, etc., and many more are awaiting orders. Not a few of our brethren are enrolled in the combative ranks, and some of these have already shed their blood for our liberties. In No. 1 General Hospital, under the command of the last President of the Canadian Medical Association, our genial Dr. Murray MacLaren, of St. John, there were four officers from Ontario, and in No. 2 General Hospital, fourteen. In reply to a request from the British War Office for Canadian medical men, offering to give them temporary commissions in the Royal Army Medical Corps, over 125 responded from Ontario, and thirty-five of these are now on their way to their posts of duty.

In addition to this long roll, training units were established in each of our Provincial Universities, in which our students of medicine were not behindhand in enrolling. It has been impossible for me to obtain the exact figures, but in the Western University, 160 students were in training. Queen's has sent with the

Army Medical Corps, First Contingent, three doctors and seven undergraduates; with the Duchess of Connaught's Hospital at Cliveden, twenty-one graduates and nine undergraduates, and with No. 6 Field Company of Engineers, three medical undergraduates; and these are additional to the large body of students who took the Officers' Training Corps' drill. In Toronto, there were over 1,800 students in the O. T. C., of whom 450 were from the Faculty of Medicine. Long after the war has ended, and God grant it may be soon, the effect of the self-sacrifice exhibited by the practitioners and students of medicine in leaving wives, children and lucrative practices, or in abandoning a course of study attained after years of effort, just when the goal came into view, will continue to clarify our vision, and give us a truer perspective. We are reminded of the words of our Master, "but I am in the midst of you as he that serveth." Noblesse oblige.

The Germans may at least be indirectly credited with one good deed—in that owing to the necessity which arose last September that holders of the licence of the College of Physicians and Surgeons of Ontario, should proceed with the Canadian forces to the British Isles, and later to the Continent, and thus work under the War Office, it became obligatory upon the part of our Provincial Council to take the necessary steps to establish medical reciprocity with Great Britain. The Council passed the enabling legislation on the 22nd of December last, and when the Ontario House rose at Easter, the Lieutenant-Governor gave the Royal assent to the Ontario Medical Amendment Act, 1915. A doctor holding a qualification to practice in Britain, may now register in Ontario, and *vice versa*. Thus Ontario is now in line with the Provinces of Prince Edward Island, Nova Scotia, New Brunswick and Quebec, and a step forward has been taken in regard to the creation of one professional standard for the British Empire. Those gentlemen who drew up the provisions of the Act of British North America and brought into being our Dominion of Canada, may have acted wisely in leaving the control of education to the respective Provinces, but should in the light of subsequent events have excepted the profession of medicine. We have long labored under the yoke then placed upon our necks, and every step in the process of release must be hailed with triumph, for we belong to a profession which is bound only by the inadequacy of the human mind to comprehend the height and depth and breadth of the states of health and disease. As Osler writes, "A man who presents evidence of proper training, who is a registered practitioner in his own country, and who brings credentials of good standing at the time of

departure, should be welcomed as a brother, treated as such in any country, and registered upon payment of the usual fee." And again, "Medicine is the only world-wide profession, following everywhere the same methods, actuated by the same ambitions, and pursuing the same ends. This homogeneity, its most characteristic feature, is not shared by the law, and not by the church, certainly not in the same degree. While in antiquity the law rivals medicine, there is not in it that extraordinary solidarity which makes the physician at home in any country, in any place where two or three sons of men are gathered together. Similar in its high aims and in the devotion of its officers, the Christian Church, widespread as it is, and saturated with the humanitarian instincts of its Founder, yet lacks that catholicity—*urbi et orbi*—which enables the physician to practise the same art amid the same surroundings in every country of the earth. There is a unity, too, in its aims—the prevention of diseases by discovering their causes and the cure and relief of sickness and suffering. In a little more than a century, a united profession, working in many lands, has done more for the race than has ever been accomplished by any body of men before."

In the *British Medical Journal* of November 21st last, there was published an article by Prof. C. Jacobs, of the University of Brussels, in which in few, yet pregnant sentences, he drew a picture of the hideous sufferings into which the cruelty of Germany had plunged our Belgian confreres in medicine and pharmacy. At least one-fifth of these two professions had been reduced to abject poverty. "Of these," says Professor Jacobs, "many of them, victims of a barbarian foe, are homeless, deprived of their laboratories, instruments, and their medical stores. What will become of those that still remain of our people, threatened as they are by the grim havoc of war and by contagious diseases, its constant followers? I have witnessed such misery amongst them. Some have had to work as navvies in order to have a few pence in their pockets; others have told me that they have not seen bread for a fortnight, but had lived exclusively on potatoes. Others had a meagre bunch of straw laid on the bare ground as a bedstead: the only pair of boots owned by one of them was falling to pieces in tatters. Men I have seen were dressed in torn garments and their children were in rags. One of my colleagues had to live on wayside herbs for three days and three nights and his wife shared his fate. A professor of a university, bereft of everything, was, when I saw him, in dire want of a bed, and another of equal academic standard was wand-

ering haggard over the countryside searching in vain for a beloved family. And some of our ranks have been taken as hostages, others have been shot, and their widows and orphans have been deprived of everything."

This appeal to our sympathies, at once brought about in Britain the foundation of a most representative committee, under the chairmanship of Sir Rickman J. Godlee, who visited this country in 1913, and upon his request, a committee for Canada was shortly afterwards formed, consisting of the leading representatives of the profession in every Province. I am happy to state that the response from our brethren throughout the length and breadth of the Dominion has been most enthusiastic, prompt, and self-sacrificing, and that the cash in hand to date amounts to the handsome sum of $7,622.00, of which Ontario has contributed $4,919.00. In addition to this, the sum of $2,600.00 was forwarded by a French committee in Montreal, so that the total for Canada amounts to $10,222.00. From the *British Medical Journal* of the 24th April, we learn that the British committee, to whose care the Canadian committee has remitted to date the sum of $6,916.00, had forwarded £964 10s. to Belgium to meet the urgent needs of Belgian doctors and pharmacists 'remaining in their own country, while a further sum of £350 had been devoted to the purchase of drugs and clothes, and by way of loans. The total sum received by the British committee, according to the same authority, amounts to £10,012 11s. 2d.

While we are pleased at the results attained, we must remind ourselves that if poor Belgium has passed through the fire already, its furnace of suffering will be heated yet again seven times, in the slow and awful torture which must be inflicted upon its cities and citizens during the process of the expulsion of the ruthless foe.

As Prof. Sarolea has stated in his Toronto addresses, so full of soul anguish, and yet so resolute, Belgium is between the upper and nether millstones, and will be ground to dust. The need for help will outlast the war, and neither must our purse strings be drawn, nor our sympathies dried up until our professional brethren in Belgium are once more reinstated. "When the day comes for the nations to adjust the balance, and right the wrongs which Belgium has suffered, one of the first duties of the medical profession throughout the world will be to see that the practitioners who have played so distinguished and useful a part in the life of their country are reinstated. We cannot at once rebuild the houses of Belgian doctors, or restock the shelves of Belgian pharmacists, but it is clear that the people require prompt medical

attention, and it is a debt of honor to try and meet the immediate necessities of their doctors and pharmacists."

To-morrow afternoon there will be placed before you for consideration the results of the labors of Dr. Wallace's committee upon Affiliation with the County and Town Medical Societies. I trust that you will decide to adopt the recommendations offered.

Were admission to the County and Town Society, within whose borders a physician practises, made the one portal of entrance to the Provincial body, and through the latter to the Dominion Association, all doubt would be removed as to the eligibility of the candidate. He would literally be judged by his peers, a truly British method. On the other hand, the impossibility of obtaining admission to the Dominion or Provincial body, if refused by the local society, would serve to regulate the steps of the beginner in practice. It is in the smaller towns and country districts that conditions are most favorable for mutual misunderstandings. Only those who have been brought up in such surroundings can appreciate how hard it is for physicians to keep on good terms with one another. The practice of medicine calls equally for the exercise of the heart and the head. The association of all the physicians of a district in a society where they may frequently meet with one another, and so learn to value the good points, and excuse the bad points of their confreres, will do much to unite the profession in this Province, and prevent misunderstandings.

These beneficial results are obvious, and extremely valuable, but there is another end to be gained from the scheme proposed, an end to which no real approach has ever been made by our Canadian profession hitherto, namely, the enrolment of every member of the profession in an organized whole, which may speak with the authority consequent upon its composition, upon any matter which affects its welfare or that of the health of the public. At present, associations and societies may only speak for their respective members, and a government may decide to consider these non-representative; whereas there are many questions, the solution of which cannot be properly secured without the aid of our profession. Assemblies, Conferences and Synods speak for every member of the various religious bodies, and the Benchers for the lawyers, but our profession has no united voice, nor will it have until each practitioner be enrolled in a common membership of a common body and recognizes that he belongs to a guild, the interests of which are incompatible with all professional bitterness, all rancour or personal hostility. The brethren must dwell together in unity.

The attention of the representatives in both Houses of Parliament should be directed by our members to the Act for the curtailment of the sale of habit-forming drugs—opium, heroin, codeine, cocaine and morphia—which was enacted in Washington recently. The above-mentioned drugs, together with all like preparations, are withdrawn from sale except under very restrictive conditions, which, if carried out in the spirit of the Act, will tend to minimize the evil, if not to wipe it out altogether.

"No person or company may sell one of these articles, except under license of the Bureau of Internal Revenue. The consumer of the dangerous drugs must present either a prescription or an order written by himself, for the drug in question, which order calls for a full description of the purchaser, including age, color of eyes, occupation, etc., and is later examined and reported upon by a government inspector. The sale of the drugs, in fact, is made so irksome to both parties in it, that it is expected that the drug victim, or the possible drug victim, will shrink from the red tape and the prospect of exposure which the law has provided for drug buyers and users." It is stated that the result of the passage of this law already is that every institution for the treatment of the victims of the drug habit, is crowded with patients who would rather be freed from its curse, than attempt to satisfy their cravings under the difficulties provided by the act. Our own laws in regard to the sale of similar drugs may be improved with advantage to the inhabitants of Canada, and the results of the passage of this act in the United States should be carefully noticed with this in view. I trust that you will individually keep your member posted so that a further important step in preventive medicine may be gained.

The subject which I have chosen as the main topic of this year's Presidential Address is "The Evolution of the Specialist in Oto-Laryngology," yet what I have to say will apply equally perhaps to any of the so-called specialties. The subject conveniently arranges itself under four heads:

(*a*) The definition of a specialist;
(*b*) The need for his existence;
(*c*) The training required;
(*d*) The nature of his relationship to the general practitioner.

In developing this subject, I shall require to use some plain speech, because between the degrading, but alluring effect of the establishment of certain polyclinics or postgraduate schools, where to quote the Carnegie Report, "the training is of a practical, not

of a fundamental, or intensive kind," "calculated to 'teach the trick,' or perhaps better to exhibit an instructor in the art of doing it," and on the other hand, the desire of the wearied practitioner to get into something "easy," this country is threatened with becoming burdened by a load of ill-trained specialists.

Believing that, in the words of Oliver Wendell Holmes, "fear of open discussion implies feebleness of inward conviction, and great sensitiveness to the expression of individual opinion is a mark of weakness," and disclaiming all intention to offend, I invite your attention and forbearance.

A specialist has been defined as "one who knows as much about all parts of his subject as any, and more about one part of it than any other," but I would paraphrase this definition and bring out its meaning more fully. A specialist is one who, *after* completing the usual time of medical study, and obtaining his degree, pursues a further course of instruction over a number of years, in some limited field, and abandoning the practice of every other branch of medicine, confines himself solely to that branch in which he has thus become qualified to speak with authority. No one has a right to pose as a specialist who has not proved his title to do so by such a prolonged course of special study, and let me remind you that the cards which some of our number permit to appear in the advertising columns of the newspapers, reading somewhat as follows: "Dr.———, Phys. & Surgeon, Graduate of the ——— University, Licentiate of the College of Physicians and Surgeons of Ontario (as if he could practice at all without this). Special attention given to Diseases of the Eye, Ear, Nose and Throat," are strictly unethical, according to the code of this Association, and in my personal opinion, beneath contempt.

The backbone of our profession is the general practitioner. As Osler writes, "There never was a time in our history in which he was so prosperous, so much in evidence, in which his prospects were so good or his power in the community so potent. He still does the work, that great mass of routine practice which brings the doctor into every household in the land, and makes him, not alone the adviser, but the valued friend. He is the standard by which we are all measured. What he is, we are; and the estimate of the profession in the eyes of the public is their estimate of him. A well-trained sensible doctor is one of the most valuable assets in a community, worth to-day, as in Homer's time, many another man. To make him efficient is our highest ambition as teachers, to save him from evil should be our constant care as a guild."

But medicine advances by leaps and bounds, and it is absolutely impossible for one brain to compass the length and breadth of medical knowledge. Nor is it reasonable that the man just graduated should be expected to be equipped with a full knowledge of medicine, embracing all the newest procedures, and ultimate tests in every specialty. If this were demanded, the curriculum of the medical course would be stretched out by many years, and the task of entering upon the practice of the healing art, already difficult enough, would be made impossible for the average man or woman. In addition, the pecuniary results to be obtained afterwards, would not be worth the investment of time and money. *Our license to practice does not even yet demand that the graduate be able to recognize a membrana tympani,* the hearing of a few lectures will not teach him this. In the Universities of McGill and Toronto, it is only very recently that the course has been made clinical, instead of didactic.

The public is both ignorant and superstitious: they have been accustomed to think that the letters M.B. or M.D.C.M. mean that the owner of these mystical characters is possessed of a complete knowledge of all things medical. On the other hand, you know and I know, that we are vastly ignorant, and that medicine is far from an exact science. It is needful to correct this ignorance on the part of the general public.

Reason is there, and the very best, that men should specialize, should fit themselves to know all there is to know upon some one of the various branches of the healing art.

The specialist exists to give assistance to his brethren, the general practitioners, not to enter into competition with them in any shape or form.

But if the specialist exists for the assistance of the general practitioner, I would have the latter fixed in his determination to demand high qualifications of those whom he calls upon for such assistance. What should those qualifications be?

1st. An excellent general preliminary education, including a knowledge of the more important modern languages, an indispensable accomplishment for one who must follow the international literature of the day.

2nd. A postgraduate position as hospital interne, preferably in medicine, but better still in both medicine and surgery.

3rd. A year or more in general practice, during which he may try himself out, and when he chooses his specialty, choose wisely.

4th. If the choice be Oto-Laryngology, then must there follow an interneship of at least eighteen months, devoted exclusively

to the special subjects, where he will toil daily with patients in a special clinic, mastering the details of examination and diagnosis, and be trained under a master eye in the technique of operations.

5th. Lastly, he must place a coping-stone of a further year at some university where he will obtain postgraduate instruction upon:

(1) Clinical diagnosis and treatment.
(2) Functional tests especially.
(3) Bedside work on surgical cases.
(4) Surgical practice on the cadaver.
(5) Practical treatment and minor operations in the out-patients' ward.
(6) Demonstrations and lectures on normal and pathological anatomy, histology and physiology.
(7) Diagnosis and pathology of labyrinth diseases.

When finally he seeks the suffrage of his fellows of the general profession, he must become attached to a hospital where he can maintain his contact with a public clinic, for otherwise he can never hope to advance, or even to keep abreast of his subject.

I have given you above the qualifications demanded by the American Laryngological, Rhinological and Otological Society, and also of the hospital where I have the honor to control the Oto-Laryngological service.

Am I too ambitious in making these demands? No; if we, as specialists, are to deserve the respect of our confreres, we can demand no less.

Unfortunately, although specialism, with its implicit claim of superior skill in one direction, is now recognized as both efficient and useful, it remains on a very informal basis, and few universities are yet equipped to give adequate preparation for specializing, but a better day is dawning, and this function will be recognized by the universities, and indeed specialization will not be allowed without such university post-graduate training.

As the Carnegie Report says: "Improved medical education will undoubtedly cut the ground from under the independent post-graduate school as we know it. This is not to say that the undergraduate medical curriculum will exhaust the field; on the contrary the undergraduate school curriculum will do only the elementary work; but that it will do, not needing subsequent and more elementary instruction to patch it up. Graduate instruction will be advanced and intensive, the natural prolongation of the elective courses now coming into vogue. For productive investigation and intensive instruction, the medical school will use its own teaching

hospital and laboratories; for the elaboration of really thorough training in specialties resting on a solid undergraduate education, it may use the great municipal hospitals of the larger cities. But advanced instruction along these lines will not thrive in isolation. It will be but the upper story of a university department of medicine. The postgraduate schools of the better type can hasten this evolution by incorporating themselves in accessible universities, taking up university ideals, and submitting to reorganization on university lines."

The truth is, we have too many so-called specialists, the damaged fruit of commercial postgraduate colleges, managed by a board of stockholders for the sake of the almighty dollar. The unfinished product of these institutions has resulted in the establishment of a class of mediocre specialists, who often bring discredit upon the whole institution of specialism. To quote from a recent writer in the *New York Medical Journal*, "The true specialist can never afford to stop working scientifically. The continued wave of progress in medicine must be closely followed by him, lest he remain behind. In his practice the true specialist should be, before all, a reliable diagnostician. Acquaintance with the commoner diseases of any organ may safely be expected of any well-trained and fairly-experienced general physican. But we have a right to demand from the specialist thorough and easy familiarity with rare and exotic affections also. In other words, in his role of consultant, he should be an expert. Likewise he should be fully at home in all therapeutic methods pertaining to his specialty." "Whereas to the mediocre specialist his specialty is nothing more than a milch cow. Such a man probably enters medical college with a firm determination of eventually 'making a specialty' of a certain class of diseases. While in college he considers everything which is not directly related to his prospective fields, as irrelevant, gets through his medical course easily, about well enough to barely pass his examinations without being plucked. His sheepskin still damp from the signatures of the faculty members, he at once goes abroad for special studies, to Paris, London, Vienna. Those studies are largely devoted to a minute investigation of the most famous cafes, restaurants, theatres and other places of amusement; a few special courses by privatdozents or assistants, given in a poorly understood foreign language, are, however, usually taken along by the way, as it were. Six or twelve months later he arrives home, where his friends have already been prepared by numerous letters of his wonderful attainments abroad, armed with instruments of the latest pattern,

declaiming about the very most recent methods of treatment of which he is now the only possessor, and superciliously sneering at old-fogeyish Dr. X., whose competitor he starts out to become."

The nature of the relationship of the specialist to the general practitioner, must be considered from opposite sides. The specialist must remember that he is dependent for his practice upon the general practitioner, and that his advice is sought for the purpose of a skilled diagnosis in determining the line of treatment, which often may be carried out fully by the family doctor. He is to be the ally, not the competitor, ever ready to support, and never willing to supplant. It is up to him, in association with the pathologist, the physiologist and the clinician, to do the bulk of the real work in the science and art of medicine.

On his side the general practitioner should make free use of the specialist. Is he to refer all cases in Oto-Laryngology to the specialist? No. But it is wrong for him to fail to do so, when he cannot fairly claim that he possesses the requisite knowledge of the conditions before him, which will enable him to serve the best interests of his patient. His conscience should tell him whether he has arrived at the point where his patient should have the benefit of a knowledge beyond his own. If this point is reached, failure to employ this extra knowledge is nothing short of criminal. If he is absolutely steadfast in calling to his aid every possible means of securing the best interests of his patient, he will surely and steadily build up for himself a reputation for reliability and carefulness, which will establish his high standing in the community, and give him the priceless possession of a conscience void of offence toward all men.

To do the opposite is to descend to the commercial basis of the public, the results of which are seen in the deplorable editorial attitude of many of our leading newspapers towards all things medical, in the scepticism of the legislature to the altruistic intentions of the profession as a body, and in the too widespread opinion among the general public, that the physician is not sincere in the promotion of measures which might prejudicially affect his pocket, because it would not be "business."

As Osler puts it, "Faith is the great lever of life; without it man can do nothing: with it, even with a fragment, as a grain of mustard seed, all things are possible to him. Faith in us, faith in our drugs and methods, is the great stock-in-trade of the profession." "To wrest from Nature the secrets which have perplexed philosophers in all ages, to track to their sources the causes of

disease, to co-relate the vast stores of knowledge, that they may be quickly available for the prevention and cure of disease, these are our ambitions."

Bibliography.

The Journal of Oto-Laryngology, Rhinology and Otology. May, 1912.

Carnegie Foundation, Medical Education in U. S. A. and Canada. Bulletin Four, 1910.

British Medical Journal, November 21st, 1914.

Cleveland Medical Journal, January, 1909.

New York Medical Journal, March 1st, 1913.

Acquanimitas, Osler.

Journal American Medical Association. Vol. XXXVI., 1901.

New York Medical Journal. Vol. 95, 1912.

PROFESSOR EDWARD PARKES ON A SPIRIT RATION*

Sir,—In a discussion on the issue of a rum ration to our soldiers I have been expecting to see some reference made to the most important scientific experiments on this subject in the Ashanti Campaign in 1874, which were made by Edward Parkes, F.R.S., to whom the British Army is enormously indebted for the improvements he effected in its hygiene. The results of these experiments were published in the *Lancet* in August, 1874, and reprinted with introduction and appendices in a small pamphlet entitled "On the Issue of a Spirit Ration during the Ashanti Campaign of 1874" (London: Churchill, 1875). This report is so valuable that one would like to reprint it in its entirety. This being impossible, I would like to quote some of his conclusions verbatim.

"It (alcohol) is not a perfectly reliable aid, and requires, when used at all, to be so with a full knowledge of its mode of action (p. viii). The first effect of alcohol, when given in a moderate dose (for example, what is equal to one fluid ounce of absolute alcohol) is reviving, but this effect is transient. As shown both in the Report and in the first Appendix, the reviving effect goes off after, at the utmost, two and a half miles of additional march, and sometimes much before this; then the previous languor and sense of exhaustion not only return, but are sometimes more intense, and if alcohol is again resorted to its effects now are less satisfactory.

* Lauder Brunton in "The Lancet."

Its reviving power is usually not so marked, and its peculiar anesthetic and narcotizing influence can only be distinctly traced. The men feel heavy, dull, disinclined to march, and are less willing and cheerful. It is clear, then, that alcohol is not a very trustworthy aid; for supposing a commanding officer, having marched twelve or fourteen miles, and desiring to cover ten more miles, finds his men weary, and, not being able to halt and feed them, orders an issue of spirits of an amount sufficient to revive but not to depress. The first effect will be good, but in less than an hour his men will be as weary as before, or probably more so. If he then reissues the spirit within so short a period of time it is certain that in the case of many men, perhaps the majority, the marching power will be lessened (p. viii). Even the reviving power of the first issue is not always so considerable as might be supposed, and, indeed, I have been surprised to find how little good effect it has sometimes produced. It appears to me, therefore, that spirits, as an issue, should be kept for emergencies, as when after great fatigue a sudden but short exertion is required, or, when a march being ended, there is great depression and failure of the heart's action, such as occurs when men have been thoroughly wetted during an exhausting march. To give strength to the men during the march, when the usual food cannot be taken, the meat extracts and coffee are both better than spirits (p. ix). The first Appendix shows how unanimous the soldiers who were experimented upon were in assigning a great superiority in reviving and sustaining power to the meat extract over the spirit. The meat extract can also be repeated over and over again without injury, indeed with benefit. Coffee, again, is also very reviving during fatigue, and has the great advantage of quenching thirst much better than the meat extract, but it requires to be well made and to be palatable, which is not always easy to ensure in forced marches (p. x)."

In his report Professor Parkes distinguishes sharply between *facts* and *opinions* (p. 28). The chief facts are:—

"1. Entire abstinence from alcohol did not make the men more sickly as a whole or more disposed to malarious fever (p. 28). 2. The marching powers of teetotallers were good. The evidence is against the usefulness of rum during marching. 3. The reviving effect of the rum when given at the end of the day was strongly spoken to (p. 31). Under exhaustion after great exertion alcohol will quicken the heart and act for a time as a restorative, though it may be hurtful or not useful during the actual period of exertion. The general feeling of warmth caused by

alcohol and the temporary strengthening of the heart's action were also, no doubt, succeeded by a slight anesthetic effect, making the sleep rather more profound. 4. The evidence of one or two of the men is that they marched better when rum had been issued on the previous evening. 5. Some of the evidence indicated the greater power of digestion given by the rum and the increased appetite given by somewhat changing the monotony of the food. Such appear to be the main *facts* brought out by the evidence (p. 32.)"

The opinions of the different witnesses were rather various, and therefore I may perhaps state shortly my own opinion founded on the facts. The use of alcohol in the body is like the use of a bill in commerce which may enable a merchant to tide over a financial difficulty by enabling him to make calls upon his capital in order to meet his present wants. If the call is simply temporary the bill may tide him over a crisis and will thus be most useful, but if his reserves are insufficient it will only hasten bankruptcy. In like manner alcohol enables a man to call on his reserves of strength and may enable him to make a spurt which he could not do without it. But if the exertion is to be long continued it simply accelerates exhaustion. After the exertion is over and the man is too tired to eat, the alcohol will help to call up his reserve strength and enable him to eat and digest better than he could without it, so that the increased assimilation of the evening meal and better sleep following it may enable him to march better next day. During exposure to cold in a healthy man the cutaneous blood-vessels contract and the blood is thus prevented from circulating over the surface and becoming cooled by the external cold. This protective mechanism sometimes continues to act after the necessity for it has ceased, and not only keeps the surface cold after the person has entered a warm room, but prevents the blood from conveying the external warmth to the internal organs. Alcohol dilates the cutaneous vessels, and by allowing warm blood from the interior of the body to circulate over the surface it causes a pleasant feeling of warmth when the external air is cold, and may also produce coolness by evaporation of sweat from the skin during exposure to heat. If the exposure to cold is short and slight, no harm may be done, but if the exposure is long continued or the external cold is great the skin is warmed at the expense of the vital organs and death results. For this reason the men who cut down timber in the Canadian forests in winter, knowing that intoxication means death, remove temptation by prohibiting spirits entirely, or as Sir Anthony Hope (quoted

by Parkes, p. 15) says, "It is an inexorable rule that all drinks found in the camp are destroyed." Meat extracts and coffee when they can be obtained are not liable to the same objections as alcohol, and Parkes has carefully drawn attention to their useful qualities.

In trying to sum up one is obliged to return to Parkes's statement (p. viii) that alcohol "requires when used at all to be so with a full knowledge of its mode of action." Such a knowledge as this can hardly be possessed by combatant officers, but it may and should be possessed by medical officers, and therefore a spirit ration to soldiers should not be issued haphazard, but only on the order of a medical officer.

UNITED KINGDOM MEAT IMPORTATIONS

In the latest annual report of the medical officer of health for Liverpool, it is seen that the importation of frozen and chilled meats still continues to increase. The population of the United Kingdom has increased nineteen per cent. in twenty years, and as the production of home-grown beef is practically stationary, the demand for imported supplies has become greater year by year. It is not so many years since the United States was the largest supplier of beef and live stock to Great Britain. The imports amounted to 251,590 tons in one year. In 1913, owing to the enormous increase in the population of the States and the decrease in the production of cattle, the imports had fallen to about 800 quarters of beef, and 10,000 head of cattle, all representing 3,316 tons. The United States, themselves, have become free importers of Australian and South American meats. England re-exported, during 1913, 6,621 tons to the United States. Practically all the supply of chilled meats for the United Kingdom has been drawn from the Argentine, now amounting annually to about 260,801 tons. The presence of foot and mouth disease in various parts of that country has somewhat interfered with this trade from that source. Great Britain recognizes that the opening up of the United States to the Canadian producer will seriously interfere with the Canadian meat traffic to the home country. Their fears in that direction are well grounded as only 328 tons were received in 1913, as compared with 583 tons in 1912.

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COMMENT FROM MONTH TO MONTH

Canadian Physicians have responded nobly to the call of the mother country. Up to the first of April it was estimated there were serving abroad in various capacities, with the armies in the field, in the base hospitals, in the navy, no less than three hundred Canadian physicians. In addition to those the University of Toronto General Hospital, McGill University Base Hospital, Queen's, Laval, have gone. Some thirty to forty volunteered to serve in Serbia; and at the request of the War Office, at least thirty-five Ontario physicians have gone to do their part with the British armies in Northern France. A conservative estimate would place the number of Canadian physicians in Europe at between five and six hundred. Added to that number many are on the list of applications to serve, so that up to the present it is impossible to find positions for all who are ready and anxious to go. Soon there will be need for physicians at home for the returned wounded and convalescent. In almost every city and town the profession stands willing to aid the dependent ones of

those who are fighting abroad for the cause of civilization and humanity.

The arrangements which have been made for the prevention of disease amongst the troops are remarkable. These were never so thorough in any previous war in history. All the advances in scientific medicine, in every department thereof, have been brought into use; and if one is to judge from what has been achieved so far, the profession of medicine stands to come well to the front in the outcome of the gigantic struggle.

In any glory which may redound to the profession of medicine, the profession of nursing will participate. It is proving that there is much self-sacrifice in that profession. The fathers and mothers who have given their daughters for the care of the sick and wounded are doing as much as those other fathers and mothers who have given their strong and healthy sons for the fight.

What may not a hundred years bring forth! In the battle of Waterloo no surgeons were allowed on the battle-field. It was only officers of high rank who, when wounded, were carried from the field and received surgical attention. The soldier lay where he fell, and only received surgical attention when the battle was finished.

By the middle of the century the surgeons had dressers to assist them; and it is historic how Florence Nightingale, after breaking down the barriers of red tape, departed for the Crimea with some forty nurses.

The Japanese taught the world the value of prevention of disease in the soldier in the field. But preventive medicine to-day goes much farther than they did. There is a well-organized fight to keep the soldier fit to fight. Not the least of the prevention measures has been the inoculation against typhoid fever, which inoculation, Osler states, has been done in 99 per cent. of the British army, and that in spite of strong agitation against it by the antis. Practically all Canadians have been inoculated.

A new feature in this great war is the Sanitary Service Company. They look out for a safe water supply by chlorination. They keep the camps sanitary. They even follow the men into

the trenches. Truly much has been done. There is yet much to do. It is the duty of every man to help in every way he can.

Nor must we forget that many American physicians and surgeons have rendered able and faithful service. Amongst these may be mentioned Dr. George W. Crile and Colonel Gorgas, as well as Carrel. A true sanitarian, a true scientist, and a true physician, Dr. Gorgas may be looked upon to clean up Serbia and stay the ravages of typhus. The hope of the world will at least go with him.

VINEGAR AS AN ANTISEPTIC

M. Loir and M. Legangneux in an interesting paper lay stress on the important part played by fresh vegetables in the dissemination of typhoid fever, and have made a study of the value of vinegar as a destroyer of the typhoid bacillus. It has long been known that Eberth's bacillus is susceptible to acidity. In wine it rapidly disappears. Dr. Gaillard has shown that the addition of every kind of alcoholic drink to water results in an almost immediate diminution of the number of contained microbes. All the pathogenic varieties are destroyed by an admixture of equal parts. The typhoid bacillus is more sensitive to white than to red wine, the former being usually more acid. The authors have made numerous experiments to determine the degree of acidity required to destroy Eberth's bacillus in water. They find that 20 grammes of vinegar to a litre of water kills the typhoid bacillus in an hour and five minutes. From this a practical inference may be drawn concerning salads. After washing the salad as usual, detaching each leaf, it should be put into water acidulated with 10 grammes of vinegar to the litre and remain immersed in this liquid for about an hour and a quarter. All vegetables ordinarily eaten uncooked may be subjected without any inconvenience to the same process. — *The Lancet*.

Editorial Notes

HON. DR. ROLPH

Trained at Cambridge University, where, as Dent tells us, "he was recognized as a young man of very remarkable and precocious intellectual powers," he became at an early age a member of the Bar of the Inner Temple, London; he was also a student of Sir Astley Cooper's, and attended Guy's Hospital, later taking the M.R.C.S., England; called to the Bar of Upper Canada in 1821, he was the fourth Bencher in the Province. He had the unusual if not unique distinction of practising both law and medicine concurrently, and of qualifying for orders in Divinity; while as a popular politician he ere long secured a seat in the Legislative Council. With marked courage he dropped law in 1832, when he had the reputation of being the most eloquent pleader at the Upper Canada Bar, and devoted himself to medicine—and politics. He was commissioned a member of the Medical Board of Upper Canada the same year (1832).

Dr. Rolph lived in troublous and stirring times and was a prominent figure on the stage of political and public life at a critical juncture in the history of our country, when men counted for much and were all too few. There were, however, giants in those days, and he was one of them. Joined with other reformers of like mind, whose goal was popular and representative government, he was one of the leaders in the fight against autocracy and entrenched privilege in high places. It became expedient, and, indeed, necessary for him to live abroad for a few years, but he was soon re-habilitated upon his return to Canada in 1843.

He could not keep out of public life, and was shortly in the Legislature; and from 1851 to 1854 he was a member of the administration. As is the case now and then of some other great men we wot of there is a fly in the pot of ointment, and one recalls that the Honourable Doctor, while head of a voluntary school, was credited with using his influence as a member of the Cabinet in order to put an end to the Faculty of Medicine of the University of Toronto, which, as history shows, was in a state of desuetude for thirty-five years, until it was revived in 1887.

Dr. Rolph's career teaches the value of erudition and versatility to one who aspires to a high position in any profession, and not the least in medicine.

He had a subtle brain which could cerebrate easily without disturbing the vegetative functions—a truly Gladstonian quality to be envied. As a public speaker he had a lucid and ornate style with the added charm of a voice of silvery intonation.

It was, however, as a pioneer teacher of medicine, and later, and for many years, as the most prominent medical educationist of the country, that Dr. Rolph became most justly celebrated. During a series of years before the rebellion he had had a number of private students whom he coached and trained, and two of these (H. H. Wright and J. H. Richardson) followed him to Rochester when he was living there in exile.

By a natural evolution Rolph's School of Medicine began to take shape shortly after his return to Toronto in 1843; and assisted by a few others, notably Dr. Joseph Workman, Dr. Rolph's efforts were soon rewarded by the great success of his school, which became a medical centre for students for over a quarter of a century. Incorporated in 1853 as the Toronto School of Medicine, Rolph's School was later and for many years the Medical Department of Victoria University; and the Doctor held office as Dean till early in 1870, passing away from this mundane sphere in October of the same year.

It is peculiarly appropriate that this portrait of such a master should be presented to the Academy by one who, as Dean of Trinity Medical College, played well his part for so many years as a leading teacher of medicine and most successful head of a school with such an honorable record amongst the educational institutions of this country.

RELIEF BELGIAN MEDICAL AND PHARMACY PROFESSORS

Subscriptions not previously acknowledged: Dr. W. E. Plummer, $5; Dr. L. G. Pinault, $5; Dr. L. M. Curren, $5; Dr. J. A. Guy, $5; Dr. M. Ayer, $10; Dr. DuVernet Jack, $2; Dr. W. D. Rankine, $25; Dr. E. A. Legace, $5; Dr. W. M. Deinstadt, $10; Dr. F. D. Weldon, $1; Dr. J. A. Langis, $5; Dr. B. D. Dash, $1; Dr. H. E. Gilmour, $5; Dr. A. S. Lamb, $3; Dr. J. A. Casswell, $10; Dr. J. M. Baxter, $5; Dr. H. W. Schwartz, $5; Dr. A. B. Atherton, $10; Dr. Jas. Bearisto, $5; G. C. VanWart, $10; Dr. W. J. Weaver, $5; Dr. S. F. A. Wainwright, $5; Dr. H. H. McNally, $10; Dr. D. C. Malcolm, $5; Dr. G. H. Field, $5; Dr. T. C. Lapp, $4; Dr. H. M. Harrison, $1; Dr. J. R. Irwin, $5; Dr. J. A. Ivey, $4; Dr. E. W. Hayden, $2;

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VACCINATION

Most of us must sometimes have wondered how far the vaccination of infants affects the type and epidemic periods of smallpox in this country, and to what extent our protection against epidemics in future will be influenced by the diminution which is taking place in the systematic vaccination of children. As a matter of history, the general adoption of infancy vaccination produced a marked change for the better in the epidemiological facts of smallpox; the disease ceased to be endemic, generally prevalent, and often fatal amongst children, and became rarer in its visitations and more and more one from which the principal sufferers who remained were adults. It does not necessarily follow, however, that under modern methods of dealing with smallpox reversion to an unprotected child population would entail reversion to eighteenth century prevalence. Again, it is beyond question that the protection of infancy vaccination, which as regards attack continues for several years, and as regards severity of illness lasts well into adult life or even to advanced age, has been priceless in past decades, when the population was running relatively large

risks of exposure to infection. But looking at more recent experience, can this protection be considered so important a factor now that epidemics are so far apart and our health authorities, with the aid of emergency vaccination, can deal with them confidently and certainly when they arise? Such questions, of course, owe most of their importance to the purely artificial position brought about by legislation. Parliament has never attempted to prevent epidemic smallpox by vaccination. Had it done so the law would have required general and compulsory re-vaccination, or, if only a single vaccination could be insisted upon, it would at least have shifted the compulsory age to young adult life, as has often been proposed. Since the first Vaccination Act all official systems of vaccination have related, with greater or less efficiency, only to the vaccination of the infant, and have been determined quite as much by political as by medical or epidemiological considerations. So far as these systems have promoted vaccination they have consistently received support from medical opinion, and when regard is had to the many thousands of people who have owed their escape from attack by smallpox to their vaccination in infancy, and to the many others who owe to the same cause the fact that when attacked by smallpox they have not suffered severely or been seriously disfigured, medical action in the matter has been justified and fruitful for good. But, meanwhile, outbreaks of smallpox, when they occur, are dealt with by an increasingly efficient system applicable alike to those who have been vaccinated in infancy and to those who are unprotected. Epidemics are kept under by administrative measures which secure the prompt detection of cases and their removal to hospitals where they are surrounded by well-vaccinated persons who do not—it would be no exaggeration to say who cannot—contract smallpox, and are there kept till their infectiousness is over. Those who have been in contact with the cases before isolation are sought out, watched, and vaccinated wherever possible, any who develop smallpox being treated at the earliest posible moment in the same way as the first cases.

The system has steadily developed and many circumstances have combined to produce its continual improvement. The fact that smallpox hospitals have themselves been associated with the spread of smallpox when placed in populous neighborhoods has been recognized, and properly isolated sites are now chosen. The system of compulsory notification, the interchange of notifications between health officers, the telephone, the motor-car, and all that these imply, have made the tracing of contact and suspected cases

possible in a way neither imagined nor imaginable twenty or thirty years ago. The staff available in our local health departments has grown in numbers and efficiency, while vaccine lymph can now be made and stored in practically unlimited quantity and be supplied at the shortest notice. As finality in these methods has not yet been reached, and other improvements will, no doubt, be made, it has now become quite arguable that administration on present lines should suffice to keep epidemic smallpox within small dimensions, whether the country has been well vaccinated in infancy or not, and that so long as administration remains good and people consent to be vaccinated in emergency, systematic vaccination may cease without serious consequences. This is no doubt the popular view, and its danger, paradoxically, lies in the fact that a good deal can be said for it. It must be remembered that even the best schemes of administration may break down, and should the breakdown occur with smallpox in a virulent phase, an 1871 type of smallpox for example, the result among a totally unprotected community may be much more serious than that of any local breakdowns of which we have had recent experience. As the behaviour and occurrence of smallpox is full of surprises, it is only fair that parents should be encouraged to protect their children from risk, while the more children and adults there are in the population who possess the protection of vaccination and revaccination the better the security of the community against smallpox and the better for the individuals who are protected. For such reasons we think most medical men would say that, notwithstanding altered conditions of recent years, it would still be advisable for the state to strengthen its vaccination laws, or if politically this is impossible, at least not to weaken such methods as remain for promoting systematic vaccination.

At the present moment it is useful to indicate in such obvious terms as the foregoing the position of medical science to some modern aspects of practical vaccination problems; and a book which has just appeared, written by Dr. C. K. Millard, the medical officer of health of Leicester, calls for notice in this connection. In some respects Dr. Millard takes what we believe is an exceptional view of the vaccination question. He would do away with systematic infancy vaccination as soon as possible, arguing that though it may be good for the individual it is actually prejudicial to the community, as it results in the presence among adults of cases of smallpox which are so mild that they are not easily recognized, and consequently go about and spread infection. We are not sure that this contention is complete on its epidemiological

side. Previous vaccination or previous smallpox are not the only causes of mild and scarcely recognizable attacks of the disease. In epidemics of certain types, such as those which have lately occurred in the United States and in Australia, the infection is so attenuated that an abundance of very slight cases has been found among the unvaccinated. If Dr. Millard's argument were sound, however, it would still hardly constitute a sufficient reason for advising a parent that his child should not be vaccinated; the whole force of the argument to be placed before him lies in the power of vaccination to protect the individual. On these and other matters the contentions and speculations in the volume are worth study and reflection. The reader, however, must be prepared to find scientific questions mingled with a considerable dose of provincial vaccination controversy, and if he is to get pleasure from his author he will have to enter into and appreciate the latter's pose. This is the position of the just man—we had almost written the only just man—to whom insight has been given to see the "vaccination question" in its true perspective, and to balance between those who are called "pro-vaccinists" and "anti-vaccinists." In these matters the hero of the book is a special conception of Dr. Millard, an anti-vaccinationist, free to carry on all his propaganda against vaccination, if only he will admit that vaccination has a protective value against smallpox. As most anti-vaccinationists spend their time in contesting this very point, the position is occasionally a little bewildering, and by those who have no great interest in the anti-vaccinationist the balancing process may be found a little tedious. After all, it has been the "pro-vaccinist" doctor and not the anti-vaccinationist who has called in the resources of modern science and invention to aid in the suppression of small pox, and it is hardly reasonable that every one of the doctor's actions which does not involve the inoculation of lymph should be put in the scale to weigh "against vaccination."

FOOD, FINGERS AND FLIES

Easily remembered, and catchy, "food, fingers, and flies," are the three principal ways in which disease germs are carried from person to person. Foods which are eaten raw, since thorough cooking destroys disease germs, are the most important which carry disease. But foods may be infected in the kitchen after cooking. Foods like oranges are safe, as they are peeled before eaten. Water and milk are particularly dangerous, sewage con-

tamination in the case of water and human contact in the case of milk, unless pasteurized, being the two prime evils. Contact between people is another way. Fingers stand for all sorts of ways in which human excretions may be exchanged. The fingers go often to the mouth and nose where in measles, whooping-cough, diphtheria, scarlet fever, pneumonia, tuberculosis germs are almost constantly present, and even in the healthy. In coughing and sneezing fine spray is thrown out from the mouth and nose. The germs have been frequently demonstrated in the spray. Drinking-cups and spoons and other things have been convicted. Insects are the third common way in which disease germs are spread. Flies are possibly the most important germ carriers in any community. Children, particularly, should always be made to wash their hands and teeth *before* eating.

WEIGHT AND MEASUREMENTS OF GERMAN SOLDIERS

Before the war, the average weights and heights of German adult men who were considered fit for military service by the army medical authorities were as follows: Average height, 5 ft. 3 in.; average weight, 143.3 lbs.; chest measurements taken with the arms evenly extended, close under the nipples in front and close under the angles of the shoulder blades behind, average inspiration, 35 in., average expiration, 32.3 in. This gives a maximum difference between inspiration and expiration of 2 3-4 in.; girth, 29 1-2 in. Whether those standards are being maintained at the present time among the new levies of the German army might be interesting.

WHAT THE SANITARY COMPANIES ARE DOING AT THE FRONT

Comparatively speaking, but little is heard at home of the work done by the Sanitary Section out at the seat of war. Yet we venture to say no more important Section exists, and that its influence has been very potent in securing the clean bill of health which is recorded by Sir John French in his valuable but too infrequent despatches. Now and then, however, the veil is lifted, and we are permitted to catch a glimpse of what is being done. We do not get this information from the ordinary war correspondent—if such an individual can be said to exist—but from letters of those in actual service with the forces. Some of the most illuminating letters that have come under our notice are

those of the Wesleyan chaplain, Rev. Owen S. Watkins, a man who has had considerable campaigning, having served in the Crete rebellion, through Lord Kitchener's Egyptian campaign, and also in the South African War, being in Ladysmith during the whole of the siege. From this experience it will be realized that he can speak with some authority on the circumstances accompanying the passage of armies through various countries. In his last letter, published in the *Methodist Recorder* for January 21st, he makes special reference to the work done by the Sanitary Section, and bears a testimony to its value which will be appreciated by many friends of the Section at home. After recounting the great change which has come over our Army within the last two months —a change which has enabled trench duty to be done on "rota," giving each lot of troops a rest away from the firing line, he goes on to describe the sanitation of the villages occupied by the troops, "a matter of the first importance if the good health of the Expeditionary Force is to be maintained. In most of the towns and villages we have occupied," he continues, "sanitation as we understand it is unknown, and the German occupation had not improved matters. The task of putting things on a proper sanitary footing was committed into the capable hands of Major Fawcett, and the transformation that was wrought by him and his sanitary corps was nothing less than marvellous. Now there has arrived on the scene a proper Sanitary Section of the R.A.M.C., commanded by Lieutenant Cooper (an expert from the Lister Institute), and composed of specially trained men. They are achieving marvels, but are building on the foundation so ably laid by Major Fawcett. Colonel Crawford and his officers also are not men content only to do their official work. They have acquired a considerable civil practice, not one that produces any monetary reward, but one that is rich in the gratitude of those in sore need—refugees from Belgium and the ruined villages of Northern France, and the impoverished peasantry of the particular district in which at present we are operating." Mr. Watkins concludes this section of his letter by saying that "I venture to say that never before in the history of war have the men been so admirably catered for, well fed, well clothed, with a medical service that is the admiration of our Allies; they seem to have had all done that can be done by human agency for their well-being." We gladly pass this on to our readers, and believe that such a message is calculated to bring comfort and confidence to all who have husbands, sons and brothers in the greatest army our Empire has ever known.—*The Sanitary Record.*

News Items

Alberta University offers to furnish a general hospital.

Dr. J. H. Shepherd, Montreal, has returned from the south.

Dr. John Stewart, Halifax, N.S. has been visiting in Toronto.

Dr. George R. McDonagh, Toronto, has returned from the West Indies.

Dr. William Oldright, Toronto, has returned from spending the winter south.

Dr. William Gunn, Clinton, Ont., has been on an extended trip through the west.

McGill University General Hospital has landed safely in England, under command of Dr. H. S. Birkett.

Lambton County medical men are offering to furnish a hospital of two hundred beds to the War Office.

The Toronto University Base Hospital left Toronto on the morning of the 15th of May, Lieut.-Colonel James A. Roberts in command.

Vancouver medical men, through Dr. A. S. Monro, has offered to supply the personnel of a general hospital of 1,040 beds to the War Office.

Dr. W. M. Hart, who was superintendent of the Saskatchewan Sanatorium for Consumptives at Qu'Appelle, in the Fifth Battalion, is reported as missing.

President Falconer and Professor I. H. Cameron deny that the latter has tendered his resignation as Professor of Surgery in the University of Toronto.

Major Thomas Bedford Richardson, M.D., who has recovered from a prolonged illness, has been placed in charge of the hospital at Exhibition Camp, Toronto.

Dr. Herbert A. Bruce tendered a good-bye reception to Lieut.-Colonel Roberts and the University of Toronto General Hospital the afternoon of the 13th of May.

The Montreal Dispensary did good work in 1914. There were treated 26,800 patients. Dr. H. B. Carmichael was elected vice-president; and Dr. H. L. Pavey, re-elected secretary.

Dr. J. F. Uren, Toronto, after undergoing an operation for appendicitis at the Wellesley Hospital, took a trip to Atlantic City, and has returned to Toronto and resumed practice.

Lieut.-Colonel J. D. Courtenay, M.D., Ottawa, has been appointed a special member of the Second Canadian Contingent, to look after wounds and diseases of the eye, ear, nose and throat.

Before departing for the front the University of Toronto General Hospital received a donation of $40,000 from the Fulford Estate, Brockville, Ontario, and a handsome limousine for convalescents from a Cleveland lady.

Dr. G. G. Campbell and Dr. J. W. Scane, Montreal, are conducting the Canadian Medical Association Journal during the absence of the editor, Dr. Andrew Macphail, and the general secretary, Dr. W. W. Francis, at the front.

The sympathy of Canadian physicians will go out to Colonel George Stirling Ryerson, M.D., Toronto, President of the Canadian Red Cross Society, through the loss of his wife in the Lusitania disaster, and the death of a son on the field of battle.

Captain David Smith, M.D., Stratford, Ont., has been placed in charge of the field hospital of the 33rd and 34th Battalions, at London Concentration Camp. This is the second Stratford physician to be accepted for an important commission, Dr. Cannon being already at Shorncliffe.

Publisher's Department